SOLID TUMOR

SOMATIC MUTATIONS SEQUENCING

DIGITAL COMPUTATIONAL REPORT

Ayass bioscience™
Bridging Science and LLC
Precision Patient Care

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BREAST CANCER

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Sample Name: F00044486-1
Sample Type: FFPE
Gender: Female
Primary Tumor Site: Breast
Collection Date: 10/13/2015

Sample Cancer Type: Breast Cancer

Report Highlights
11 Relevant Biomarkers
7 Therapies Available
107 Clinical Trials

Relevant Breast Cancer Findings

Gene	Finding
ERBB2	***ERBB2 I655V***
PIK3CA	***PIK3CA H1047R***

Relevant Biomarkers

Therapeutic

Tier	Genomic Alteration	Relevant Therapies (In this cancer type)	Relevant Therapies (In other cancer type)	Clinical Trials
IA	*PIK3CA H1047R* Allele Frequency: 56.10%	**alpelisib + hormone therapy** [1, 2]	None	36
IA	*BRCA1 K654Sfs*47* Allele Frequency: 93.13%	olaparib talazoparib	**bevacizumab + olaparib** [1, 2] **niraparib** [1] **olaparib** [1, 2] **rucaparib** [1, 2]	41
IA	*BRCA2 K862Sfs*17* Allele Frequency: 9.49%	olaparib talazoparib	**bevacizumab + olaparib** [1, 2] **niraparib** [1] **olaparib** [1, 2] **rucaparib** [1, 2]	41
IIC	*CHEK1 I471Vfs*17* Allele Frequency: 96.77%	None	**niraparib** [1] **olaparib** [1] bevacizumab + olaparib	30
IIC	*ERBB2 I655V* Allele Frequency: 48.02%	None	trastuzumab deruxtecan	21
IIC	*FGFR4 G388R* Allele Frequency: 99.82%	None	None	12

Public data sources included in relevant therapies: FDA[1], NCCN, **EMA**[2], ESMO
Tier Reference: Li et al. *Standards and Guidelines for the Interpretation and Reporting of Sequence Variants in Cancer: A Joint Consensus Recommendation of the Association for Molecular Pathology, American Society of Clinical Oncology, and College of American Pathologists.* J Mol Diagn. 2017 Jan;19(1):4-23.

Relevant Biomarkers (continued)

Therapeutic

Tier	Genomic Alteration	Relevant Therapies (In this cancer type)	Relevant Therapies (In other cancer type)	Clinical Trials
IIC	*TSC2 c.482-3C>T* Allele Frequency: 63.79%	None	None	11
IIC	*PMS2 K541Efs*3* Allele Frequency: 60.98%	None	None	10
IIC	*CCND1 amplification*	None	None	6
IIC	*FGF19 amplification*	None	None	3
IIC	*FGF3 amplification*	None	None	2

Public data sources included in relevant therapies: FDA[1], NCCN, **EMA**[2], ESMO
Tier Reference: Li et al. *Standards and Guidelines for the Interpretation and Reporting of Sequence Variants in Cancer: A Joint Consensus Recommendation of the Association for Molecular Pathology, American Society of Clinical Oncology, and College of American Pathologists.* J Mol Diagn. 2017 Jan;19(1):4-23.

Alerts informed by public data sources: Contraindicated, Resistance, Breakthrough, Fast Track

*BRCA1 K654Sfs*47*	**pidnarulex** [1]
*BRCA2 K862Sfs*17*	**pidnarulex** [1]
*CHEK1 I471Vfs*17*	**pidnarulex** [1]
ERBB2 I655V	**BDTX-189** [1]

Public data sources included in alerts: FDA[1], NCCN, **EMA**[2], ESMO

Variant Details

DNA Sequence Variants

Gene	Amino Acid Change	Coding	Variant ID	Locus	Exon	Variant Effect	Location
CHEK1	p.(I471Vfs*17)	c.1411_1412delATinsG	.	chr11:125525195	13	frameshift Block Substitution	exonic
BRCA2	p.(K862Sfs*17)	c.2584_2588delAAAAA	.	chr13:32911073	11	frameshift Deletion	exonic
TSC2	p.(?)	c.482-3C>T	.	chr16:2105400	6	unknown	splicesite_3
ERBB2	p.(I655V)	c.1963A>G	.	chr17:37879588	17	missense	exonic
BRCA1	p.(K654Sfs*47)	c.1961delA	.	chr17:41245586	10	frameshift Deletion	exonic
PIK3CA	p.(H1047R)	c.3140A>G	COSM775	chr3:178952085	21	missense	exonic
FGFR4	p.(G388R)	c.1162G>A	.	chr5:176520243	9	missense	exonic
PMS2	p.(K541Efs*3)	c.1620_1621insG	.	chr7:6026775	11	frameshift Insertion	exonic

Variant Details (continued)

Copy Number Variations

Gene	Locus	Copy Number
CCND1	chr11:69455972	8.2
FGF19	chr11:69513954	7.32
FGF3	chr11:69624976	6.31

Biomarker Descriptions

BRCA1 (BRCA1 DNA repair associated)

Background: The breast cancer early onset gene 1 (BRCA1) encodes one of two BRCA proteins (BRCA1 and BRCA2) initially discovered as major hereditary breast cancer genes. Although structurally unrelated, both BRCA1 and BRCA2 exhibit tumor suppressor function and are integrally involved in the homologous recombination repair (HRR) pathway, a pathway critical in the repair of damaged DNA. Specifically, BRCA1/2 are required for repair of chromosomal double strand breaks (DSBs) which are highly unstable and compromise genome integrity[1,2]. Inherited pathogenic mutations in BRCA1/2 are known to confer increased risk in women for breast and ovarian cancer[3] and in men for breast and prostate cancer[4,5]. For individuals diagnosed with inherited pathogenic or likely pathogenic BRCA1/2 variants, estimated lifetime risks range from 41% to 90% for developing breast cancer and 8 to 62% for developing ovarian cancer[6].

Alterations and prevalence: Inherited BRCA1/2 mutations occur in 1:400 to 1:500 individuals and are observed in 10-15% of ovarian cancer and 5-10% of breast cancer[7,8,9,10,11,12,13]. Somatic alterations in BRCA1 are observed in 2-8% of breast, ovarian, cervical, uterine, diffuse large B-cell lymphoma (DLBCL), melanoma, gastric, bladder, squamous lung, colorectal, and head and neck cancers[14,15].

Potential relevance: Individuals possessing BRCA1/2 pathogenic germline or somatic mutations are shown to exhibit sensitivity to platinum based chemotherapy as well as treatment with poly (ADP-ribose) polymerase inhibitors (PARPi)[16]. Inhibitors targeting PARP induce synthetic lethality in recombination deficient BRCA1/2 mutant cells[17,18]. Consequently, several PARP inhibitors have been FDA approved for BRCA1/2-mutated cancers. Olaparib[19] (2014) was the first PARPi to be approved by the FDA for BRCA1/2 aberrations. Originally approved for the treatment of germline variants, olaparib is now indicated (2018) for the maintenance treatment of both germline BRCA1/2-mutated (gBRCAm) and somatic BRCA1/2-mutated (sBRCAm) epithelial ovarian, fallopian tube, or primary peritoneal cancers that are responsive to platinum-based chemotherapy. Olaparib is also indicated for the treatment of patients with gBRCAm HER2-negative metastatic breast cancer and metastatic pancreatic adenocarcinoma. Additionally, olaparib[19] is approved (2020) for metastatic castration-resistant prostate cancer (mCRPC) with deleterious or suspected deleterious, germline or somatic mutations in HRR genes that includes BRCA1. Rucaparib[20] is also approved (2020) for deleterious gBRCAm or sBRCAm mCRPC. Talazoparib[21] (2018) is indicated for the treatment of gBRCAm HER2-negative locally advanced or metastatic breast cancer. Niraparib[22] (2017) is another PARPi approved for the treatment of epithelial ovarian, fallopian tube, or primary peritoneal cancers with a deleterious or suspected deleterious BRCA mutation. Despite tolerability and efficacy, acquired resistance to PARP inhibition has been clinically reported[23]. One of the most common mechanisms of resistance includes secondary intragenic mutations that restore BRCA1/2 functionality[24]. In addition to PARP inhibitors, other drugs which promote synthetic lethality have been investigated for BRCA mutations. In 2022, the FDA granted fast track designation to the small molecule inhibitor, pidnarulex[25], for BRCA1/2, PALB2, or other homologous recombination deficiency (HRD) mutations in breast and ovarian cancers. Like PARPi, pidnarulex promotes synthetic lethality but through an alternative mechanism which involves stabilization of G-quadruplexes at the replication fork leading to DNA breaks and genomic instability.

BRCA2 (BRCA2 DNA repair associated)

Background: The breast cancer early onset gene 2 (BRCA2) encodes one of two BRCA proteins (BRCA1 and BRCA2) initially discovered as major hereditary breast cancer genes. Although structurally unrelated, both BRCA1 and BRCA2 exhibit tumor suppressor function and are integrally involved in the homologous recombination repair (HRR) pathway, a pathway critical in the repair of damaged DNA. Specifically, BRCA1/2 are required for repair of chromosomal double strand breaks (DSBs) which are highly unstable and compromise genome integrity[1,2]. Inherited pathogenic mutations in BRCA1/2 are known to confer increased risk in women for breast and ovarian cancer[3] and in men for breast and prostate cancer[4,5]. For individuals diagnosed with inherited pathogenic or likely pathogenic BRCA1/2 variants, estimated lifetime risks range from 41% to 90% for developing breast cancer and 8 to 62% for developing ovarian cancer[6].

Biomarker Descriptions (continued)

Alterations and prevalence: Inherited BRCA1/2 mutations occur in 1:400 to 1:500 individuals and are observed in 10-15% of ovarian cancer and 5-10% of breast cancer[7,8,9,10,11,12,13]. Somatic alterations in BRCA2 are observed in 5-15% of melanomas, uterine, cervical, gastric, colorectal, esophageal, and lung cancers[14,15].

Potential relevance: Individuals possessing BRCA1/2 pathogenic germline or somatic mutations are shown to exhibit sensitivity to platinum based chemotherapy as well as treatment with poly (ADP-ribose) polymerase inhibitors (PARPi)[16]. Inhibitors targeting PARP induce synthetic lethality in recombination deficient BRCA1/2 mutant cells[17,18]. Consequently, several PARP inhibitors have been FDA approved for BRCA1/2-mutated cancers. Olaparib[19] (2014) was the first PARPi to be approved by the FDA for BRCA1/2 aberrations. Originally approved for the treatment of germline variants, olaparib is now indicated (2018) for the maintenance treatment of both germline BRCA1/2-mutated (gBRCAm) and somatic BRCA1/2-mutated (sBRCAm) epithelial ovarian, fallopian tube, or primary peritoneal cancers that are responsive to platinum-based chemotherapy. Olaparib is also indicated for the treatment of patients with gBRCAm HER2-negative metastatic breast cancer and metastatic pancreatic adenocarcinoma. Additionally, olaparib[19] is approved (2020) for metastatic castration-resistant prostate cancer (mCRPC) with deleterious or suspected deleterious, germline or somatic mutations in HRR genes that includes BRCA2. Rucaparib[20] is also approved (2020) for deleterious gBRCAm or sBRCAm mCRPC. Talazoparib[21] (2018) is indicated for the treatment of gBRCAm HER2-negative locally advanced or metastatic breast cancer. Niraparib[22] (2017) is another PARPi approved for the treatment of epithelial ovarian, fallopian tube, or primary peritoneal cancers with a deleterious or suspected deleterious BRCA mutation. Despite tolerability and efficacy, acquired resistance to PARP inhibition has been clinically reported[23]. One of the most common mechanisms of resistance includes secondary intragenic mutations that restore BRCA1/2 functionality[24]. In addition to PARP inhibitors, other drugs which promote synthetic lethality have been investigated for BRCA mutations. In 2022, the FDA granted fast track designation to the small molecule inhibitor, pidnarulex[25], for BRCA1/2, PALB2, or other homologous recombination deficiency (HRD) mutations in breast and ovarian cancers. Like PARPi, pidnarulex promotes synthetic lethality but through an alternative mechanism which involves stabilization of G-quadruplexes at the replication fork leading to DNA breaks and genomic instability.

CCND1 (cyclin D1)

Background: The CCND1 gene encodes the cyclin D1 protein, a member of the highly conserved D-cyclin family that also includes CCND2 and CCND3[26,27,28]. D-type cyclins are known to regulate cell cycle progression by binding to and activating cyclin dependent kinases (CDKs), specifically CDK4 and CDK6, which leads to the phosphorylation and inactivation of the retinoblastoma (RB1) protein[26,27]. Consequently, RB1 inactivation results in E2F transcription factor activation and cellular G1/S phase transition thereby resulting in cell cycle progression, a common event observed in tumorigenesis[26,27,29]. Aberrations in the D-type cyclins have been observed to promote tumor progression suggesting an oncogenic role for CCND1[28,30].

Alterations and prevalence: Recurrent somatic alterations to CCND1, including mutations, amplifications, and chromosomal translocations, are observed in many cancer types. A common mechanism of these alterations is to increase the expression and nuclear localization of the cyclin D1 protein. Recurrent somatic mutations include missense mutations at codons T286 and P287 and c-terminal truncating mutations that are enriched in about 33% of uterine cancer, and missense mutations at Y44 that are enriched in about 50% of Mantle cell lymphoma (MCL)[14,15,31,32]. These mutations block phosphorylation-dependent nuclear export and proteolysis[33,34,35,36]. CCND1 is recurrently amplified in many cancer types, including up to 35% of esophageal cancer, 20-30% of head and neck cancer, and 10-20% of breast, squamous lung, and bladder cancers[14,15,37]. MCL is genetically characterized by the t(11;14)(q13;q13) translocation, a rearrangement that juxtaposes CCND1 to the immunoglobulin heavy (IgH) chain gene. This rearrangement leads to constitutive expression of cyclin D1 and plays an important role in MCL pathogenesis[38,39].

Potential relevance: Currently, no therapies are approved for CCND1 aberrations.

CHEK1 (checkpoint kinase 1)

Background: The CHEK1 gene encodes the checkpoint kinase 1 protein and belongs to a family of serine/threonine checkpoint kinases, that also includes CHEK2[40]. Checkpoint kinases play an important role in S phase and G2/M transition and DNA damage induced cell cycle arrest[41]. CHEK1 is a tumor suppressor and it interacts with proteins involved in transcription regulation, cell-cycle arrest, and DNA repair including homologous recombination repair (HRR)[42,43]. Upon DNA damage, CHEK1 is phosphorylated and activated by DNA damage repair proteins ATM and ATR[42]. Activated CHEK1 subsequently phosphorylates and negatively regulates downstream proteins such as CDC25A thereby slowing or stalling DNA replication[42,44].

Alterations and prevalence: Recurrent somatic alterations of CHEK1 include mutations and copy number loss. Somatic mutations of CHEK1 are observed in 3% of endometrial carcinoma, 2% of non-small cell lung cancer and 1% of cervical squamous carcinoma

Biomarker Descriptions (continued)

cases[14,45]. CHEK1 copy number loss occurs in 10% of seminoma, 8% of non-seminomatous germ cell tumor, 5% of ocular melanoma, and 3% of melanoma cases[14,45].

Potential relevance: The PARP inhibitor, olaparib[19] is approved (2020) for metastatic castration-resistant prostate cancer (mCRPC) with deleterious or suspected deleterious, germline or somatic mutations in HRR genes that includes CHEK1. In 2022, the FDA granted fast track designation to the small molecule inhibitor, pidnarulex[25], for BRCA1/2, PALB2, or other homologous recombination deficiency (HRD) mutations in breast and ovarian cancers.

ERBB2 (erb-b2 receptor tyrosine kinase 2)

Background: The ERBB2 gene encodes the erb-b2 receptor tyrosine kinase 2, a member of the human epidermal growth factor receptor (HER) family. Along with ERBB2/HER2, EGFR/ERBB1/HER1, ERBB3/HER3, and ERBB4/HER4 make up the HER protein family[46]. All ERBB/HER proteins encode transmembrane receptor tyrosine kinases. However, ERBB2/HER2 is an orphan receptor with no known ligand. ERBB2 preferentially binds other ligand bound ERBB/HER family members to form hetero-dimers resulting in the activation of ERBB2 tyrosine kinase activity and subsequent activation of the PI3K/AKT/MTOR and RAS/RAF/MAPK/ERK signaling pathways which promote cell proliferation, differentiation, and survival[47]. Recurrent focal amplification of the ERBB2 gene leads to increased expression in several cancer types. ERBB2 overexpression in immortalized cell lines is oncogenic and leads to ERBB2 homo-dimerization and activation without ligand binding[48,49,50].

Alterations and prevalence: ERBB2 gene amplification occurs in 10-20% of breast, esophageal, and gastric cancers, 5-10% of bladder, cervical, pancreas, and uterine cancers, and 1-5% of colorectal, lung, and ovarian cancers[14,15,51,52,53,54,55,56]. Recurrent somatic activating mutations in ERBB2/HER2 occur at low frequencies (<1%) in diverse cancer types[15,57,58]. In breast, bladder, and colorectal cancers, the most common recurrent ERBB2 activating mutations include kinase domain mutations L755S and V777L and the extracellular domain mutation S310F. In lung cancer, the most common recurrent ERBB2 activating mutations include in-frame exon 20 insertions, particularly Y772_A775dup.

Potential relevance: The discovery of ERBB2/HER2 as an important driver of breast cancer in 1987 led to the development of trastuzumab, a humanized monoclonal antibody with specificity to the extracellular domain of HER2[59,60]. Trastuzumab[61] was FDA approved for the treatment of HER2 positive breast cancer in 1998, and subsequently in HER2 positive metastatic gastric and gastroesophageal junction adenocarcinoma in 2010. Additional monoclonal antibody therapies have been approved by the FDA for HER2-positive breast cancer including pertuzumab[62] (2012), a humanized monoclonal antibody that inhibits HER2 dimerization, and ado-trastuzumab emtansine[63] (2013), a conjugate of trastuzumab and a potent antimicrotubule agent. The combination of pertuzumab, trastuzumab, and a taxane is the preferred front-line regimen for HER2-positive metastatic breast cancer[64]. In addition to monoclonal antibodies, the small molecule inhibitor lapatinib[65], with specificity for both EGFR and ERBB2, was FDA approved (2007) for the treatment of patients with advanced HER2-positive breast cancer who have received prior therapy including trastuzumab. In 2017, the FDA approved the use of neratinib[66], an irreversible kinase inhibitor of EGFR, ERBB2/HER2, and ERBB4, for the extended adjuvant treatment of adult patients with early stage HER2-positive breast cancer. In 2020, the FDA approved neratinib[66] in combination with capecitabine for HER2-positive advanced or metastatic patients after two or more prior HER2-directed therapies. Also in 2020, the TKI irbinitinib[67] was FDA approved for HER2 overexpressing or amplified breast cancer in combination with trastuzumab and capecitabine. In 2021, the PD-1 blocking antibody, pembrolizumab, in combination with trastuzumab, fluoropyrimidine- and platinum-based chemotherapy, was approved for HER2 amplified gastric or gastroesophageal (GEJ) adenocarcinoma in the first line[68]. The vaccine, nelipepimut-S[69], was granted fast-track designation by the FDA (2016) in patients with low to intermediate HER2 expressing (IHC score 1+ or 2+) breast cancer. In 2018 fast-track designation was granted to the monoclonal antibody margetuximab[70] in patients with ERBB2 positive breast cancer previously treated with an anti-HER2 therapy. In 2019, fast track designation was granted to the HER2-targeting antibody drug conjugate, amcenestrant[71], for HER2-positive advanced or metastatic breast cancer after one or more prior anti-HER2 based regimens. Additionally, in 2019, the novel bispecific antibody, zanidatamab[72], received fast-track designation in combination with standard chemotherapy for patients with HER2-overexpressing gastroesophageal adenocarcinoma (GEA) and breakthrough therapy designation (2020) as a monotherapy for patients with HER2-amplified biliary tract cancer[73]. In 2020, BDTX-189[74] received fast-track designation for adult patients with solid tumors harboring an allosteric human ERBB2 mutation or exon 20 insertion, and the humanized anti-HER2 antibody drug conjugate disitamab vedotin received breakthrough designation for adult patients with HER2-positive urothelial cancer after previous platinum-chemotherapy treatment[75]. In 2021, the antibody-drug conjugate ARX788[76] received fast-track designation as a monotherapy for advanced or metastatic HER2-positive breast cancer that have progressed on one or more anti-HER2 regimens. Additionally, in 2021, fast track designation was granted to HER2 targeted chimeric antigen receptor macrophage (CAR-M), CT-0508[77], for HER2-overexpressing solid tumors. Certain activating mutations have been observed to impart sensitivity to neratinib, afatinib, lapatinib, and trastuzumab, or dacomitinib in early and ongoing clinical studies[78,79,80,81,82]. ERBB2 kinase domain mutations R896G and V659E both showed response to afatinib in two NSCLC case studies[83,84]. Additionally, acquired HER2

Biomarker Descriptions (continued)

mutations in estrogen receptor-positive (ER+) breast cancer have been shown to confer resistance to hormone therapy[85]. However, this was shown to be overcome by neratinib in combination with therapies targeting ER[85].

FGF19 (fibroblast growth factor 19)

Background: The FGF19 gene encodes the fibroblast growth factor 19 protein, a member of the FGF protein family composed of twenty-two members[86,87]. With the exception of four non-signaling FGF memebers (FGF11-14), FGF proteins function as ligands and mediate the activation of the fibroblast growth factor receptor (FGFR) family of tyrosine kinases[86,87]. Upon FGF-mediated stimulation, FGFRs activate several oncogenic signaling pathways, including the RAS/RAF/MEK/ERK, PI3K/AKT/MTOR, PLC/PKC, and JAK/STAT pathways thereby influencing cell proliferation, migration, and survival[88,89,90]. FGF19 is specifically observed to bind FGFR4 with increased affinity in the presence of the transmembrane protein klotho beta (KLB) which functions as a cofactor in FGF19 mediated FGFR4 activation[91,92]. FGF19-mediated aberrant signaling has been identified as an oncogenic driver in hepatocellular carcinoma[91,93].

Alterations and prevalence: FGF19 amplification is observed in about 35% of esophageal cancer, 23% of head and neck cancer, 10-15% of invasive breast carcinoma, cholangiocarcinoma, squamous lung, and bladder cancers as well as 5-7% of melanoma, liver, ovarian, and stomach cancers[14]. FGF19 overexpression is correlated with the development and tumor progression in hepatocellular carcinoma[94].

Potential relevance: Currently, no therapies are approved for FGF19 aberrations. Selective, irreversible FGFR4 inhibitors, including fisogatinib (BLU-554), are under current clinical trial evaluation. In a phase-I clinical study of fisogatinib in patients with advanced hepatocellular carcinoma, 63% of the 115 patients enrolled were FGF19-positive by IHC[95]. Additionally, in 53 patients with tissue available for evaluation, 96% also exhibited mRNA-expression of FGFR4 and KLB. The total overall response rate observed for fisogatinib in FGF19-positive patients evaluable for response was 17% (11/66)[95].

FGF3 (fibroblast growth factor 3)

Background: The FGF3 gene encodes the fibroblast growth factor 3 protein, a member of the FGF protein family composed of twenty-two members[86,87]. With the exception of four non-signaling FGF memebers (FGF11-14), FGF proteins function as ligands and mediate the activation of the fibroblast growth factor receptor (FGFR) family of tyrosine kinases[86,87]. Upon FGF-mediated stimulation, FGFRs activate several oncogenic signaling pathways, including the RAS/RAF/MEK/ERK, PI3K/AKT/MTOR, PLC/PKC, and JAK/STAT pathways thereby influencing cell proliferation, migration, and survival[88,89,90]. Specifically, FGF3 has been shown to bind to both FGFR1 and FGFR2[96,97]. Overexpression of FGF3 has been associated with certain tumor types including lung and liver cancers[98,99]. Additionally, constitutive ectopic expression has been suggested to promote tumorigenesis in vitro, supporting an oncogenic role for FGF3[97].

Alterations and prevalence: FGF3 amplification is observed in about 35% of esophageal cancer, 24% of head and neck cancer, 10-15% of invasive breast carcinoma, squamous lung, and bladder cancers as well as 5-10% of cholangiocarcinoma, melanoma, liver, ovarian and stomach cancers[14]. FGF3 overexpression is correlated with non-small cell lung cancer (NSCLC) development as well as tumor metastasis and recurrence in hepatocellular carcinoma[98,99].

Potential relevance: Currently, no therapies are approved for FGF3 aberrations.

FGFR4 (fibroblast growth factor receptor 4)

Background: The FGFR4 gene encodes fibroblast growth receptor 4, a member of the fibroblast growth-factor receptor (FGFR) family that also includes FGFR1, 2, and 3. These proteins are single-transmembrane receptors composed of three extracellular immunoglobulin (Ig)-type domains and an intracellular kinase domain. Upon FGF-mediated stimulation, FGFRs activate several oncogenic signaling pathways, including the RAS/RAF/MEK/ERK, PI3K/AKT/MTOR, PLC/PKC, and JAK/STAT pathways influencing cell proliferation, migration, and survival[88,89,90]. FGFR4 selectively binds the ligand FGF19, wherein FGF19-mediated aberrant signaling has been identified as an oncogenic driver in hepatocellular carcinoma[91,93].

Alterations and prevalence: Aberrations most common to the FGFR family are amplifications, followed by mutations and fusions. The majority of these aberrations result in gain of function[100]. FGFR4 exhibits amplification in up to 15% of clear-cell renal cell carcinomas, with somatic mutations observed in up to 6% of melanomas and uterine cancer[14,15].

Potential relevance: Currently, no targeted therapies are approved for FGFR4 aberrations. However, FDA-approved multi-kinase inhibitors known to inhibit FGFR family members, including regorafenib (2013), ponatinib (2012), lenvatinib (2015), nintedanib (2014), and pazopanib (2009), have demonstrated anti-tumor activity in select cancer types harboring FGFR alterations[101,102,103,104,105,106,107].

Biomarker Descriptions (continued)

Selective, irreversible FGFR4 inhibitors, including BLU-554, have underwent clinical trial evaluation. In a phase-I clinical study of BLU-554 in patients with FGF19-positive advanced hepatocellular carcinoma, the overall response rate was 17%[95].

PIK3CA (phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit alpha)

Background: The PIK3CA gene encodes the phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit alpha of the class I phosphatidylinositol 3-kinase (PI3K) enzyme[108]. PI3K is a heterodimer that contains a p85 regulatory subunit, which couples one of four p110 catalytic subunits to activated tyrosine protein kinases[109,110]. The p110 catalytic subunits include p110α, β, δ, γ and are encoded by genes PIK3CA, PIK3CB, PIK3CD, and PIK3CG, respectively[109]. PI3K catalyzes the conversion of phosphatidylinositol (4,5)-bisphosphate (PI(4,5)P2) into phosphatidylinositol (3,4,5)-trisphosphate (PI(3,4,5)P3) while the phosphatase and tensin homolog (PTEN) catalyzes the reverse reaction[111,112]. The reversible phosphorylation of inositol lipids regulates diverse aspects of cell growth and metabolism[111,112,113,114]. Recurrent somatic alterations in PIK3CA are frequent in cancer and result in the activation of PI3K/AKT/MTOR pathway, which can influence several hallmarks of cancer including cell proliferation, apoptosis, cancer cell metabolism and invasion, and genetic instability[115,116,117].

Alterations and prevalence: Recurrent somatic activating mutations in PIK3CA are common in diverse cancers and are observed in 20-30% of breast, cervical, and uterine cancers and 10-20% of bladder, gastric, head and neck, and colorectal cancers[14,15]. Activating mutations in PIK3CA commonly cluster in two regions corresponding to the exon 9 helical (codons E542/E545) and exon 20 kinase (codon H1047) domains, each having distinct mechanisms of activation[118,119,120]. PIK3CA resides in the 3q26 cytoband, a region frequently amplified (10-30%) in diverse cancers including squamous carcinomas of the lung, cervix, head and neck, and esophagus, and in serous ovarian and uterine cancers[14,15].

Potential relevance: The PI3K inhibitor, alpelisib[121], is FDA approved (2019) in combination with fulvestrant for the treatment of patients with PIK3CA-mutated, hormone receptor (HR)-positive, human epidermal growth factor receptor 2 (HER2)-negative, advanced or metastatic breast cancer. Additionally, a phase Ib study of alpelisib with letrozole in patients with metastatic estrogen receptor (ER)-positive breast cancer, the clinical benefit rate, defined as lack of disease progression ≥ 6 months, was 44% (7/16) in PIK3CA-mutated tumors and 20% (2/20) in PIK3CA wild-type tumors[122]. Specifically, exon 20 H1047R mutations were associated with more durable clinical responses in comparison to exon 9 E545K mutations[122]. However, alpelisib did not improve response when administered with letrozole in patients with ER+ early breast cancer with PIK3CA mutations[123]. Case studies with MTOR inhibitors sirolimus and temsirolimus report isolated cases of clinical response in PIK3CA mutated refractory cancers[124,125].

PMS2 (PMS1 homolog 2, mismatch repair system component)

Background: The PMS2 gene encodes the PMS1 homolog 2 protein[40]. PMS2 is a tumor suppressor gene that heterodimerizes with MLH1 to form the MutLα complex[126]. The MutLα complex functions as an endonuclease that is specifically involved in the mismatch repair (MMR) process. Mutations in MLH1 result in the inactivation of MutLα and degradation of PMS2[127]. PMS2, along with MLH1, MSH6, and MSH2, form the core components of the MMR pathway[126,127]. The MMR pathway is critical to the repair of mismatch errors which typically occur during DNA replication. Deficiency in MMR (dMMR) is characterized by mutations and loss of expression in these genes. dMMR is associated with microsatellite instability (MSI), which is defined as a change in the length of a microsatellite in a tumor as compared to normal tissue[128,129,130]. MSI-high (MSI-H) is a hallmark of Lynch Syndrome (LS), also known as hereditary non-polyposis colorectal cancer, which is caused by germline mutations in MMR genes[128,131]. LS is associated with an increased risk of developing colorectal cancer, as well as other cancers, including endometrial and stomach cancer[129,131,132,133]. Specifically, PMS2 mutations are associated with increased risk of ovarian cancer[134].

Alterations and prevalence: Somatic mutations in PMS2 are observed in 7% of uterine corpus endometrial carcinoma, 6% of skin cutaneous melanoma, and 4% of adrenocortical carcinoma[14,15].

Potential relevance: Pembrolizumab (2014) is an anti-PD-1 immune checkpoint inhibitor that is approved for patients with dMMR solid tumors that have progressed on prior therapies[68]. Nivolumab (2015), an anti-PD-1 immune checkpoint inhibitor, is approved alone or in combination with the cytotoxic T-lymphocyte antigen 4 (CTLA-4) blocking antibody, ipilimumab (2011), for patients with dMMR colorectal cancer that have progressed on prior treatment[135,136].

TSC2 (TSC complex subunit 2)

Background: The TSC2 gene encodes the tuberin protein. TSC2 and TSC1 (also known as hamartin) form a complex through their respective coiled-coil domains[137]. The TSC1-TSC2 complex is a negative regulator of the mTOR signaling pathway that regulates cell growth, cell proliferation, and protein and lipid synthesis[138]. Specifically, the TSC1-TSC2 complex acts as a GTPase activating (GAP)

Biomarker Descriptions (continued)

protein that inhibits the G-protein RHEB and keeps it in an inactivated state (RHEB-GDP). GTP bound RHEB (RHEB-GTP) is required to activate the mTOR complex 1 (mTORC1). TSC1 and TSC2 are tumor suppressor genes. Loss of function mutations in TSC1 and TSC2 lead to dysregulation of the mTOR pathway[137,139]. Inactivating germline mutations in TSC1 and TSC2 are associated with tuberous sclerosis complex (TSC), an autosomal dominant neurocutaneous and progressive disorder that presents with multiple benign tumors in different organs[137].

Alterations and prevalence: Somatic mutations are observed in up to 8% of skin cutaneous melanoma, 7% of uterine corpus endometrial carcinoma, and 4% of cervical squamous cell carcinoma[14,15].

Potential relevance: Currently, no therapies are approved for TSC2 aberrations.

Relevant Therapy Details

Current FDA Information

● In this cancer type ○ In other cancer type ◑ In this cancer type and other cancer types

FDA information is current as of 2022-06-15. For the most up-to-date information, search www.fda.gov.

PIK3CA H1047R

● alpelisib + fulvestrant

Cancer type: Breast Cancer **Label as of:** 2022-05-04 **Variant class:** PIK3CA H1047R mutation

Other criteria: ERBB2 negative, Hormone receptor positive

Indications and usage:
PIQRAY® is a kinase inhibitor indicated in combination with fulvestrant for the treatment of postmenopausal women, and men, with hormone receptor (HR)- positive, human epidermal growth factor receptor 2 (HER2)-negative, PIK3CA-mutated, advanced or metastatic breast cancer as detected by an FDA-approved test following progression on or after an endocrine-based regimen.

Reference:

https://www.accessdata.fda.gov/drugsatfda_docs/label/2022/212526s006lbl.pdf

BRCA1 K654Sfs*47

○ niraparib

Cancer type: Ovarian Cancer **Label as of:** 2021-07-27 **Variant class:** BRCA1 mutation or HR Deficient

Indications and usage:

ZEJULA® is a poly (ADP-ribose) polymerase (PARP) inhibitor indicated:

- for the maintenance treatment of adult patients with advanced epithelial ovarian, fallopian tube, or primary peritoneal cancer who are in a complete or partial response to first-line platinum-based chemotherapy.
- for the maintenance treatment of adult patients with recurrent epithelial ovarian, fallopian tube, or primary peritoneal cancer who are in a complete or partial response to platinum-based chemotherapy.
- for the treatment of adult patients with advanced ovarian, fallopian tube, or primary peritoneal cancer who have been treated with 3 or more prior chemotherapy regimens and whose cancer is associated with homologous recombination deficiency (HRD) positive status defined by either:
  - a deleterious or suspected deleterious BRCA mutation, or
  - genomic instability and who have progressed more than 6 months after response to the last platinum-based chemotherapy.

Select patients for therapy based on an FDA-approved companion diagnostic for ZEJULA®.

Reference:

https://www.accessdata.fda.gov/drugsatfda_docs/label/2021/208447s022s024lbl.pdf

BRCA1 K654Sfs*47 (continued)

olaparib, bevacizumab + olaparib

Cancer type: Castration-Resistant Prostate Cancer, Ovarian Cancer **Label as of:** 2022-03-11 **Variant class:** BRCA1 mutation

Indications and usage:

LYNPARZA® is a poly (ADP-ribose) polymerase (PARP) inhibitor indicated:

Ovarian cancer

- for the maintenance treatment of adult patients with deleterious or suspected deleterious germline or somatic BRCA-mutated advanced epithelial ovarian, fallopian tube or primary peritoneal cancer who are in complete or partial response to first-line platinum-based chemotherapy. Select patients for therapy based on an FDA-approved companion diagnostic for LYNPARZA®.
- in combination with bevacizumab for the maintenance treatment of adult patients with advanced epithelial ovarian, fallopian tube or primary peritoneal cancer who are in complete or partial response to first-line platinum-based chemotherapy and whose cancer is associated with homologous recombination deficiency (HRD)-positive status defined by either:
  - a deleterious or suspected deleterious BRCA mutation, and/or
  - genomic instability.

Select patients for therapy based on an FDA-approved companion diagnostic for LYNPARZA®.

- for the maintenance treatment of adult patients with recurrent epithelial ovarian, fallopian tube or primary peritoneal cancer, who are in complete or partial response to platinum-based chemotherapy.
- for the treatment of adult patients with deleterious or suspected deleterious germline BRCA-mutated (gBRCAm) advanced ovarian cancer who have been treated with three or more prior lines of chemotherapy. Select patients for therapy based on an FDA-approved companion diagnostic for LYNPARZA®.

Breast cancer

- for the adjuvant treatment of adult patients with deleterious or suspected deleterious gBRCAm human epidermal growth factor receptor 2 (HER2)-negative high risk early breast cancer who have been treated with neoadjuvant or adjuvant chemotherapy. Select patients for therapy based on an FDA-approved companion diagnostic for LYNPARZA®.
- for the treatment of adult patients with deleterious or suspected deleterious gBRCAm, HER2-negative metastatic breast cancer who have been treated with chemotherapy in the neoadjuvant, adjuvant or metastatic setting. Patients with hormone receptor (HR)-positive breast cancer should have been treated with a prior endocrine therapy or be considered inappropriate for endocrine therapy. Select patients for therapy based on an FDA-approved companion diagnostic for LYNPARZA®.

Pancreatic cancer

- for the maintenance treatment of adult patients with deleterious or suspected deleterious gBRCAm metastatic pancreatic adenocarcinoma whose disease has not progressed on at least 16 weeks of a first-line platinum-based chemotherapy regimen. Select patients for therapy based on an FDA-approved companion diagnostic for LYNPARZA®.

Prostate cancer

- for the treatment of adult patients with deleterious or suspected deleterious germline or somatic homologous recombination repair (HRR) gene-mutated metastatic castration-resistant prostate cancer (mCRPC) who have progressed following prior treatment with enzalutamide or abiraterone. Select patients for therapy based on an FDA-approved companion diagnostic for LYNPARZA®.

Reference:

https://www.accessdata.fda.gov/drugsatfda_docs/label/2022/208558s023lbl.pdf

BRCA1 K654Sfs*47 (continued)

rucaparib

Cancer type: Castration-Resistant Prostate Cancer **Label as of:** 2022-06-10 **Variant class:** BRCA1 mutation

Indications and usage:

RUBRACA® is a poly (ADP-ribose) polymerase (PARP) inhibitor indicated:

Ovarian cancer

- for the maintenance treatment of adult patients with recurrent epithelial ovarian, fallopian tube, or primary peritoneal cancer who are in a complete or partial response to platinum-based chemotherapy.

Prostate cancer

- for the treatment of adult patients with a deleterious BRCA mutation (germline and/or somatic)-associated metastatic castration-resistant prostate cancer (mCRPC) who have been treated with androgen receptor-directed therapy and a taxane-based chemotherapy. Select patients for therapy based on an FDA-approved companion diagnostic for RUBRACA®.

This indication is approved under accelerated approval based on objective response rate and duration of response. Continued approval for this indication may be contingent upon verification and description of clinical benefit in confirmatory trials.

Reference:

https://www.accessdata.fda.gov/drugsatfda_docs/label/2022/209115s011lbl.pdf

BRCA2 K862Sfs*17

niraparib

Cancer type: Ovarian Cancer **Label as of:** 2021-07-27 **Variant class:** BRCA2 mutation or HR Deficient

Indications and usage:

ZEJULA® is a poly (ADP-ribose) polymerase (PARP) inhibitor indicated:

- for the maintenance treatment of adult patients with advanced epithelial ovarian, fallopian tube, or primary peritoneal cancer who are in a complete or partial response to first-line platinum-based chemotherapy.
- for the maintenance treatment of adult patients with recurrent epithelial ovarian, fallopian tube, or primary peritoneal cancer who are in a complete or partial response to platinum-based chemotherapy.
- for the treatment of adult patients with advanced ovarian, fallopian tube, or primary peritoneal cancer who have been treated with 3 or more prior chemotherapy regimens and whose cancer is associated with homologous recombination deficiency (HRD) positive status defined by either:
  - a deleterious or suspected deleterious BRCA mutation, or
  - genomic instability and who have progressed more than 6 months after response to the last platinum-based chemotherapy.

Select patients for therapy based on an FDA-approved companion diagnostic for ZEJULA®.

Reference:

https://www.accessdata.fda.gov/drugsatfda_docs/label/2021/208447s022s024lbl.pdf

BRCA2 K862Sfs*17 (continued)

olaparib, bevacizumab + olaparib

Cancer type: Castration-Resistant Prostate Cancer, Ovarian Cancer **Label as of:** 2022-03-11 **Variant class:** BRCA2 mutation

Indications and usage:

LYNPARZA® is a poly (ADP-ribose) polymerase (PARP) inhibitor indicated:

Ovarian cancer

- for the maintenance treatment of adult patients with deleterious or suspected deleterious germline or somatic BRCA-mutated advanced epithelial ovarian, fallopian tube or primary peritoneal cancer who are in complete or partial response to first-line platinum-based chemotherapy. Select patients for therapy based on an FDA-approved companion diagnostic for LYNPARZA®.
- in combination with bevacizumab for the maintenance treatment of adult patients with advanced epithelial ovarian, fallopian tube or primary peritoneal cancer who are in complete or partial response to first-line platinum-based chemotherapy and whose cancer is associated with homologous recombination deficiency (HRD)-positive status defined by either:
  - a deleterious or suspected deleterious BRCA mutation, and/or
  - genomic instability.

Select patients for therapy based on an FDA-approved companion diagnostic for LYNPARZA®.

- for the maintenance treatment of adult patients with recurrent epithelial ovarian, fallopian tube or primary peritoneal cancer, who are in complete or partial response to platinum-based chemotherapy.
- for the treatment of adult patients with deleterious or suspected deleterious germline BRCA-mutated (gBRCAm) advanced ovarian cancer who have been treated with three or more prior lines of chemotherapy. Select patients for therapy based on an FDA-approved companion diagnostic for LYNPARZA®.

Breast cancer

- for the adjuvant treatment of adult patients with deleterious or suspected deleterious gBRCAm human epidermal growth factor receptor 2 (HER2)-negative high risk early breast cancer who have been treated with neoadjuvant or adjuvant chemotherapy. Select patients for therapy based on an FDA-approved companion diagnostic for LYNPARZA®.
- for the treatment of adult patients with deleterious or suspected deleterious gBRCAm, HER2-negative metastatic breast cancer who have been treated with chemotherapy in the neoadjuvant, adjuvant or metastatic setting. Patients with hormone receptor (HR)-positive breast cancer should have been treated with a prior endocrine therapy or be considered inappropriate for endocrine therapy. Select patients for therapy based on an FDA-approved companion diagnostic for LYNPARZA®.

Pancreatic cancer

- for the maintenance treatment of adult patients with deleterious or suspected deleterious gBRCAm metastatic pancreatic adenocarcinoma whose disease has not progressed on at least 16 weeks of a first-line platinum-based chemotherapy regimen. Select patients for therapy based on an FDA-approved companion diagnostic for LYNPARZA®.

Prostate cancer

- for the treatment of adult patients with deleterious or suspected deleterious germline or somatic homologous recombination repair (HRR) gene-mutated metastatic castration-resistant prostate cancer (mCRPC) who have progressed following prior treatment with enzalutamide or abiraterone. Select patients for therapy based on an FDA-approved companion diagnostic for LYNPARZA®.

Reference:

https://www.accessdata.fda.gov/drugsatfda_docs/label/2022/208558s023lbl.pdf

BRCA2 K862Sfs*17 (continued)

rucaparib

Cancer type: Castration-Resistant Prostate Cancer **Label as of:** 2022-06-10 **Variant class:** BRCA2 mutation

Indications and usage:

RUBRACA® is a poly (ADP-ribose) polymerase (PARP) inhibitor indicated:

Ovarian cancer

- for the maintenance treatment of adult patients with recurrent epithelial ovarian, fallopian tube, or primary peritoneal cancer who are in a complete or partial response to platinum-based chemotherapy.

Prostate cancer

- for the treatment of adult patients with a deleterious BRCA mutation (germline and/or somatic)-associated metastatic castration-resistant prostate cancer (mCRPC) who have been treated with androgen receptor-directed therapy and a taxane-based chemotherapy. Select patients for therapy based on an FDA-approved companion diagnostic for RUBRACA®.

This indication is approved under accelerated approval based on objective response rate and duration of response. Continued approval for this indication may be contingent upon verification and description of clinical benefit in confirmatory trials.

Reference:

https://www.accessdata.fda.gov/drugsatfda_docs/label/2022/209115s011lbl.pdf

CHEK1 I471Vfs*17

olaparib

Cancer type: Castration-Resistant Prostate Cancer **Label as of:** 2022-03-11 **Variant class:** CHEK1 mutation

Indications and usage:

LYNPARZA® is a poly (ADP-ribose) polymerase (PARP) inhibitor indicated:

Ovarian cancer

- for the maintenance treatment of adult patients with deleterious or suspected deleterious germline or somatic BRCA-mutated advanced epithelial ovarian, fallopian tube or primary peritoneal cancer who are in complete or partial response to first-line platinum-based chemotherapy. Select patients for therapy based on an FDA-approved companion diagnostic for LYNPARZA®.
- in combination with bevacizumab for the maintenance treatment of adult patients with advanced epithelial ovarian, fallopian tube or primary peritoneal cancer who are in complete or partial response to first-line platinum-based chemotherapy and whose cancer is associated with homologous recombination deficiency (HRD)-positive status defined by either:
  - a deleterious or suspected deleterious BRCA mutation, and/or
  - genomic instability.

Select patients for therapy based on an FDA-approved companion diagnostic for LYNPARZA®.

- for the maintenance treatment of adult patients with recurrent epithelial ovarian, fallopian tube or primary peritoneal cancer, who are in complete or partial response to platinum-based chemotherapy.
- for the treatment of adult patients with deleterious or suspected deleterious germline BRCA-mutated (gBRCAm) advanced ovarian cancer who have been treated with three or more prior lines of chemotherapy. Select patients for therapy based on an FDA-approved companion diagnostic for LYNPARZA®.

Breast cancer

- for the adjuvant treatment of adult patients with deleterious or suspected deleterious gBRCAm human epidermal growth factor receptor 2 (HER2)-negative high risk early breast cancer who have been treated with neoadjuvant or adjuvant chemotherapy. Select patients for therapy based on an FDA-approved companion diagnostic for LYNPARZA®.
- for the treatment of adult patients with deleterious or suspected deleterious gBRCAm, HER2-negative metastatic breast cancer who have been treated with chemotherapy in the neoadjuvant, adjuvant or metastatic setting. Patients with hormone receptor (HR)-positive breast cancer should have been treated with a prior endocrine therapy or be considered inappropriate for endocrine therapy. Select patients for therapy based on an FDA-approved companion diagnostic for LYNPARZA®.

Pancreatic cancer

- for the maintenance treatment of adult patients with deleterious or suspected deleterious gBRCAm metastatic pancreatic adenocarcinoma whose disease has not progressed on at least 16 weeks of a first-line platinum-based chemotherapy regimen. Select patients for therapy based on an FDA-approved companion diagnostic for LYNPARZA®.

Prostate cancer

- for the treatment of adult patients with deleterious or suspected deleterious germline or somatic homologous recombination repair (HRR) gene-mutated metastatic castration-resistant prostate cancer (mCRPC) who have progressed following prior treatment with enzalutamide or abiraterone. Select patients for therapy based on an FDA-approved companion diagnostic for LYNPARZA®.

Reference:

https://www.accessdata.fda.gov/drugsatfda_docs/label/2022/208558s023lbl.pdf

CHEK1 I471Vfs*17 (continued)

niraparib

Cancer type: Ovarian Cancer **Label as of:** 2021-07-27 **Variant class:** HR Deficient

Indications and usage:

ZEJULA® is a poly (ADP-ribose) polymerase (PARP) inhibitor indicated:

- for the maintenance treatment of adult patients with advanced epithelial ovarian, fallopian tube, or primary peritoneal cancer who are in a complete or partial response to first-line platinum-based chemotherapy.
- for the maintenance treatment of adult patients with recurrent epithelial ovarian, fallopian tube, or primary peritoneal cancer who are in a complete or partial response to platinum-based chemotherapy.
- for the treatment of adult patients with advanced ovarian, fallopian tube, or primary peritoneal cancer who have been treated with 3 or more prior chemotherapy regimens and whose cancer is associated with homologous recombination deficiency (HRD) positive status defined by either:
  - a deleterious or suspected deleterious BRCA mutation, or
  - genomic instability and who have progressed more than 6 months after response to the last platinum-based chemotherapy.

Select patients for therapy based on an FDA-approved companion diagnostic for ZEJULA®.

Reference:

https://www.accessdata.fda.gov/drugsatfda_docs/label/2021/208447s022s024lbl.pdf

Current NCCN Information

● In this cancer type ○ In other cancer type ◑ In this cancer type and other cancer types

NCCN information is current as of 2022-06-01. For the most up-to-date information, search www.nccn.org.
For NCCN International Adaptations & Translations, search www.nccn.org/global/international_adaptations.aspx.

PIK3CA H1047R

● alpelisib + fulvestrant

Cancer type: Breast Cancer **Variant class:** PIK3CA activating mutation

Other criteria: ERBB2 negative, Hormone receptor positive

NCCN Recommendation category: 1

Population segment (Line of therapy):
- Stage IV; Invasive, Recurrent, Unresectable, Local, Regional (Second-line therapy); Preferred intervention

Reference: NCCN Guidelines® - NCCN-Breast Cancer [Version 3.2022]

BRCA1 K654Sfs*47

○ bevacizumab + olaparib

Cancer type: Ovarian Cancer **Variant class:** BRCA1 mutation

NCCN Recommendation category: 1

Population segment (Line of therapy):
- Epithelial, Fallopian Tube, Primary Peritoneal; Stage II, Stage III, Stage IV; Partial response, Complete response (Maintenance therapy)

Reference: NCCN Guidelines® - NCCN-Ovarian Cancer [Version 1.2022]

○ niraparib

Cancer type: Ovarian Cancer **Variant class:** BRCA1 mutation

NCCN Recommendation category: 1

Population segment (Line of therapy):
- Epithelial, Fallopian Tube, Primary Peritoneal; Persistent, Recurrent, Partial response, Complete response (Maintenance therapy); Useful in certain circumstances

Reference: NCCN Guidelines® - NCCN-Ovarian Cancer [Version 1.2022]

BRCA1 K654Sfs*47 (continued)

niraparib

Cancer type: Ovarian Cancer **Variant class:** BRCA1 mutation

NCCN Recommendation category: 1

Population segment (Line of therapy):
- Epithelial, Fallopian Tube, Primary Peritoneal; Stage II, Stage III, Stage IV; Partial response, Complete response (Maintenance therapy)

Reference: NCCN Guidelines® - NCCN-Ovarian Cancer [Version 1.2022]

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olaparib

Cancer type: Ovarian Cancer **Variant class:** BRCA1 mutation

NCCN Recommendation category: 1

Population segment (Line of therapy):
- Epithelial, Fallopian Tube, Primary Peritoneal; Persistent, Recurrent, Partial response, Complete response (Maintenance therapy); Useful in certain circumstances

Reference: NCCN Guidelines® - NCCN-Ovarian Cancer [Version 1.2022]

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olaparib

Cancer type: Ovarian Cancer **Variant class:** BRCA1 mutation

NCCN Recommendation category: 1

Population segment (Line of therapy):
- Epithelial, Fallopian Tube, Primary Peritoneal; Stage II, Stage III, Stage IV; Partial response, Complete response (Maintenance therapy)

Reference: NCCN Guidelines® - NCCN-Ovarian Cancer [Version 1.2022]

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olaparib

Cancer type: Castration-Resistant Prostate Cancer **Variant class:** BRCA1 mutation

NCCN Recommendation category: 1

Population segment (Line of therapy):
- Adenocarcinoma; Metastatic (Subsequent therapy); Useful in certain circumstances

Reference: NCCN Guidelines® - NCCN-Prostate Cancer [Version 4.2022]

BRCA1 K654Sfs*47 (continued)

rucaparib

Cancer type: Ovarian Cancer **Variant class:** BRCA1 mutation

NCCN Recommendation category: 1

Population segment (Line of therapy):
- Epithelial, Fallopian Tube, Primary Peritoneal; Persistent, Recurrent, Partial response, Complete response (Maintenance therapy); Useful in certain circumstances

Reference: NCCN Guidelines® - NCCN-Ovarian Cancer [Version 1.2022]

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niraparib

Cancer type: Ovarian Cancer **Variant class:** BRCA1 mutation

NCCN Recommendation category: 2A

Population segment (Line of therapy):
- Epithelial, Fallopian Tube, Primary Peritoneal; Stage II, Stage III, Stage IV; Partial response, Complete response (Maintenance therapy)

Reference: NCCN Guidelines® - NCCN-Ovarian Cancer [Version 1.2022]

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niraparib

Cancer type: Ovarian Cancer **Variant class:** BRCA1 mutation or HR Deficient

NCCN Recommendation category: 2A

Population segment (Line of therapy):
- Epithelial, Less Common Ovarian Cancers, Fallopian Tube, Primary Peritoneal; Recurrent (Recurrence therapy); Preferred intervention

Reference: NCCN Guidelines® - NCCN-Ovarian Cancer [Version 1.2022]

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olaparib

Cancer type: Ovarian Cancer **Variant class:** BRCA1 mutation

NCCN Recommendation category: 2A

Population segment (Line of therapy):
- Epithelial, Fallopian Tube, Primary Peritoneal; Stage II, Stage III, Stage IV; Partial response, Complete response (Maintenance therapy)

Reference: NCCN Guidelines® - NCCN-Ovarian Cancer [Version 1.2022]

BRCA1 K654Sfs*47 (continued)

rucaparib

Cancer type: Ovarian Cancer **Variant class:** BRCA1 mutation

NCCN Recommendation category: 2A

Population segment (Line of therapy):
- Epithelial, Less Common Ovarian Cancers, Fallopian Tube, Primary Peritoneal; Recurrent (Recurrence therapy); Preferred intervention

Reference: NCCN Guidelines® - NCCN-Ovarian Cancer [Version 1.2022]

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rucaparib

Cancer type: Pancreatic Cancer **Variant class:** BRCA1 mutation

NCCN Recommendation category: 2A

Population segment (Line of therapy):
- Adenocarcinoma; Metastatic (Maintenance therapy); Useful in certain circumstances

Reference: NCCN Guidelines® - NCCN-Pancreatic Adenocarcinoma [Version 1.2022]

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rucaparib

Cancer type: Castration-Resistant Prostate Cancer **Variant class:** BRCA1 mutation

NCCN Recommendation category: 2A

Population segment (Line of therapy):
- Adenocarcinoma; Metastatic (Subsequent therapy); Useful in certain circumstances

Reference: NCCN Guidelines® - NCCN-Prostate Cancer [Version 4.2022]

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olaparib

Cancer type: Castration-Resistant Prostate Cancer **Variant class:** BRCA1 mutation

NCCN Recommendation category: 2B

Population segment (Line of therapy):
- Adenocarcinoma; Visceral Metastases (Subsequent therapy); Useful in certain circumstances

Reference: NCCN Guidelines® - NCCN-Prostate Cancer [Version 4.2022]

BRCA1 K654Sfs*47 (continued)

rucaparib

Cancer type: Castration-Resistant Prostate Cancer **Variant class:** BRCA1 mutation

NCCN Recommendation category: 2B

Population segment (Line of therapy):
- Adenocarcinoma; Visceral Metastases (Subsequent therapy); Useful in certain circumstances

Reference: NCCN Guidelines® - NCCN-Prostate Cancer [Version 4.2022]

BRCA2 K862Sfs*17

bevacizumab + olaparib

Cancer type: Ovarian Cancer **Variant class:** BRCA2 mutation

NCCN Recommendation category: 1

Population segment (Line of therapy):
- Epithelial, Fallopian Tube, Primary Peritoneal; Stage II, Stage III, Stage IV; Partial response, Complete response (Maintenance therapy)

Reference: NCCN Guidelines® - NCCN-Ovarian Cancer [Version 1.2022]

niraparib

Cancer type: Ovarian Cancer **Variant class:** BRCA2 mutation

NCCN Recommendation category: 1

Population segment (Line of therapy):
- Epithelial, Fallopian Tube, Primary Peritoneal; Persistent, Recurrent, Partial response, Complete response (Maintenance therapy); Useful in certain circumstances

Reference: NCCN Guidelines® - NCCN-Ovarian Cancer [Version 1.2022]

niraparib

Cancer type: Ovarian Cancer **Variant class:** BRCA2 mutation

NCCN Recommendation category: 1

Population segment (Line of therapy):
- Epithelial, Fallopian Tube, Primary Peritoneal; Stage II, Stage III, Stage IV; Partial response, Complete response (Maintenance therapy)

Reference: NCCN Guidelines® - NCCN-Ovarian Cancer [Version 1.2022]

BRCA2 K862Sfs*17 (continued)

olaparib

Cancer type: Ovarian Cancer **Variant class:** BRCA2 mutation

NCCN Recommendation category: 1

Population segment (Line of therapy):
- Epithelial, Fallopian Tube, Primary Peritoneal; Persistent, Recurrent, Partial response, Complete response (Maintenance therapy); Useful in certain circumstances

Reference: NCCN Guidelines® - NCCN-Ovarian Cancer [Version 1.2022]

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olaparib

Cancer type: Ovarian Cancer **Variant class:** BRCA2 mutation

NCCN Recommendation category: 1

Population segment (Line of therapy):
- Epithelial, Fallopian Tube, Primary Peritoneal; Stage II, Stage III, Stage IV; Partial response, Complete response (Maintenance therapy)

Reference: NCCN Guidelines® - NCCN-Ovarian Cancer [Version 1.2022]

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olaparib

Cancer type: Castration-Resistant Prostate Cancer **Variant class:** BRCA2 mutation

NCCN Recommendation category: 1

Population segment (Line of therapy):
- Adenocarcinoma; Metastatic (Subsequent therapy); Useful in certain circumstances

Reference: NCCN Guidelines® - NCCN-Prostate Cancer [Version 4.2022]

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rucaparib

Cancer type: Ovarian Cancer **Variant class:** BRCA2 mutation

NCCN Recommendation category: 1

Population segment (Line of therapy):
- Epithelial, Fallopian Tube, Primary Peritoneal; Persistent, Recurrent, Partial response, Complete response (Maintenance therapy); Useful in certain circumstances

Reference: NCCN Guidelines® - NCCN-Ovarian Cancer [Version 1.2022]

BRCA2 K862Sfs*17 (continued)

niraparib

Cancer type: Ovarian Cancer **Variant class:** BRCA2 mutation

NCCN Recommendation category: 2A

Population segment (Line of therapy):
- Epithelial, Fallopian Tube, Primary Peritoneal; Stage II, Stage III, Stage IV; Partial response, Complete response (Maintenance therapy)

Reference: NCCN Guidelines® - NCCN-Ovarian Cancer [Version 1.2022]

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niraparib

Cancer type: Ovarian Cancer **Variant class:** BRCA2 mutation or HR Deficient

NCCN Recommendation category: 2A

Population segment (Line of therapy):
- Epithelial, Less Common Ovarian Cancers, Fallopian Tube, Primary Peritoneal; Recurrent (Recurrence therapy); Preferred intervention

Reference: NCCN Guidelines® - NCCN-Ovarian Cancer [Version 1.2022]

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niraparib

Cancer type: Uterine Leiomyosarcoma **Variant class:** BRCA2 mutation

NCCN Recommendation category: 2A

Population segment (Line of therapy):
- (Second-line therapy); Useful in certain circumstances, Consider

Reference: NCCN Guidelines® - NCCN-Uterine Neoplasms [Version 1.2022]

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olaparib

Cancer type: Ovarian Cancer **Variant class:** BRCA2 mutation

NCCN Recommendation category: 2A

Population segment (Line of therapy):
- Epithelial, Fallopian Tube, Primary Peritoneal; Stage II, Stage III, Stage IV; Partial response, Complete response (Maintenance therapy)

Reference: NCCN Guidelines® - NCCN-Ovarian Cancer [Version 1.2022]

BRCA2 K862Sfs*17 (continued)

olaparib

Cancer type: Uterine Leiomyosarcoma **Variant class:** BRCA2 mutation

NCCN Recommendation category: 2A

Population segment (Line of therapy):
- (Second-line therapy); Useful in certain circumstances, Consider

Reference: NCCN Guidelines® - NCCN-Uterine Neoplasms [Version 1.2022]

rucaparib

Cancer type: Ovarian Cancer **Variant class:** BRCA2 mutation

NCCN Recommendation category: 2A

Population segment (Line of therapy):
- Epithelial, Less Common Ovarian Cancers, Fallopian Tube, Primary Peritoneal; Recurrent (Recurrence therapy); Preferred intervention

Reference: NCCN Guidelines® - NCCN-Ovarian Cancer [Version 1.2022]

rucaparib

Cancer type: Pancreatic Cancer **Variant class:** BRCA2 mutation

NCCN Recommendation category: 2A

Population segment (Line of therapy):
- Adenocarcinoma; Metastatic (Maintenance therapy); Useful in certain circumstances

Reference: NCCN Guidelines® - NCCN-Pancreatic Adenocarcinoma [Version 1.2022]

rucaparib

Cancer type: Castration-Resistant Prostate Cancer **Variant class:** BRCA2 mutation

NCCN Recommendation category: 2A

Population segment (Line of therapy):
- Adenocarcinoma; Metastatic (Subsequent therapy); Useful in certain circumstances

Reference: NCCN Guidelines® - NCCN-Prostate Cancer [Version 4.2022]

BRCA2 K862Sfs*17 (continued)

rucaparib

Cancer type: Uterine Leiomyosarcoma **Variant class:** BRCA2 mutation

NCCN Recommendation category: 2A

Population segment (Line of therapy):
- (Second-line therapy); Useful in certain circumstances, Consider

Reference: NCCN Guidelines® - NCCN-Uterine Neoplasms [Version 1.2022]

olaparib

Cancer type: Castration-Resistant Prostate Cancer **Variant class:** BRCA2 mutation

NCCN Recommendation category: 2B

Population segment (Line of therapy):
- Adenocarcinoma; Visceral Metastases (Subsequent therapy); Useful in certain circumstances

Reference: NCCN Guidelines® - NCCN-Prostate Cancer [Version 4.2022]

rucaparib

Cancer type: Castration-Resistant Prostate Cancer **Variant class:** BRCA2 mutation

NCCN Recommendation category: 2B

Population segment (Line of therapy):
- Adenocarcinoma; Visceral Metastases (Subsequent therapy); Useful in certain circumstances

Reference: NCCN Guidelines® - NCCN-Prostate Cancer [Version 4.2022]

CHEK1 I471Vfs*17

olaparib

Cancer type: Castration-Resistant Prostate Cancer **Variant class:** CHEK1 mutation

NCCN Recommendation category: 1

Population segment (Line of therapy):
- Adenocarcinoma; Metastatic (Subsequent therapy); Useful in certain circumstances

Reference: NCCN Guidelines® - NCCN-Prostate Cancer [Version 4.2022]

CHEK1 I471Vfs*17 (continued)

olaparib

Cancer type: Castration-Resistant Prostate Cancer **Variant class:** CHEK1 mutation

NCCN Recommendation category: 2B

Population segment (Line of therapy):
- Adenocarcinoma; Visceral Metastases (Subsequent therapy); Useful in certain circumstances

Reference: NCCN Guidelines® - NCCN-Prostate Cancer [Version 4.2022]

niraparib

Cancer type: Ovarian Cancer **Variant class:** HR Deficient

NCCN Recommendation category: 2A

Population segment (Line of therapy):
- Epithelial, Less Common Ovarian Cancers, Fallopian Tube, Primary Peritoneal; Recurrent (Recurrence therapy); Preferred intervention

Reference: NCCN Guidelines® - NCCN-Ovarian Cancer [Version 1.2022]

ERBB2 I655V

trastuzumab deruxtecan

Cancer type: Non-Small Cell Lung Cancer **Variant class:** ERBB2 mutation

NCCN Recommendation category: 2A

Population segment (Line of therapy):
- Metastatic (Line of therapy not specified)

Reference: NCCN Guidelines® - NCCN-Non-Small Cell Lung Cancer [Version 3.2022]

Current EMA Information

● In this cancer type ○ In other cancer type ◑ In this cancer type and other cancer types

EMA information is current as of 2022-06-15. For the most up-to-date information, search www.ema.europa.eu/ema.

PIK3CA H1047R

● alpelisib + fulvestrant

Cancer type: Breast Cancer **Label as of:** 2021-10-11 **Variant class:** PIK3CA H1047R mutation

Other criteria: ERBB2 negative, Hormone receptor positive

Reference:

https://www.ema.europa.eu/en/documents/product-information/piqray-epar-product-information_en.pdf

BRCA1 K654Sfs*47

○ olaparib, bevacizumab + olaparib

Cancer type: Castration-Resistant Prostate Cancer, Ovarian Cancer **Label as of:** 2022-05-06 **Variant class:** BRCA1 mutation

Reference:

https://www.ema.europa.eu/en/documents/product-information/lynparza-epar-product-information_en.pdf

○ rucaparib

Cancer type: Ovarian Cancer **Label as of:** 2022-05-23 **Variant class:** BRCA1 mutation

Reference:

https://www.ema.europa.eu/en/documents/product-information/rubraca-epar-product-information_en.pdf

BRCA2 K862Sfs*17

○ olaparib, bevacizumab + olaparib

Cancer type: Castration-Resistant Prostate Cancer, Ovarian Cancer **Label as of:** 2022-05-06 **Variant class:** BRCA2 mutation

Reference:

https://www.ema.europa.eu/en/documents/product-information/lynparza-epar-product-information_en.pdf

BRCA2 K862Sfs*17 (continued)

rucaparib

Cancer type: Ovarian Cancer **Label as of:** 2022-05-23 **Variant class:** BRCA2 mutation

Reference:

https://www.ema.europa.eu/en/documents/product-information/rubraca-epar-product-information_en.pdf

Current ESMO Information

● In this cancer type ○ In other cancer type ◑ In this cancer type and other cancer types

ESMO information is current as of 2022-06-01. For the most up-to-date information, search www.esmo.org.

PIK3CA H1047R

● alpelisib + fulvestrant

Cancer type: Breast Cancer **Variant class:** PIK3CA exon 20 mutation

Other criteria: ERBB2 negative, ER positive

ESMO Level of Evidence/Grade of Recommendation: I / B

Population segment (Line of therapy):
- Luminal A; Advanced, Metastatic (Second-line therapy); ESMO-MCBS v1.1 score: 2

Reference: ESMO Clinical Practice Guidelines - ESMO-Metastatic Breast Cancer [Ann Oncol (2021) VOLUME 32, ISSUE 12, P1475-1495, DECEMBER 01, 2021; DOI:https://doi.org/10.1016/j.annonc.2021.09.019]

BRCA1 K654Sfs*47

● olaparib

Cancer type: Breast Cancer **Variant class:** BRCA1 mutation

Other criteria: ERBB2 negative, ER positive

ESMO Level of Evidence/Grade of Recommendation: I / A

Population segment (Line of therapy):
- Luminal A; Advanced, Metastatic (Second-line therapy); ESMO-MCBS v1.1 score: 4

Reference: ESMO Clinical Practice Guidelines - ESMO-Metastatic Breast Cancer [Ann Oncol (2021) VOLUME 32, ISSUE 12, P1475-1495, DECEMBER 01, 2021; DOI:https://doi.org/10.1016/j.annonc.2021.09.019]

● talazoparib

Cancer type: Breast Cancer **Variant class:** BRCA1 mutation

Other criteria: ERBB2 negative, ER positive

ESMO Level of Evidence/Grade of Recommendation: I / A

Population segment (Line of therapy):
- Luminal A; Advanced, Metastatic (Second-line therapy); ESMO-MCBS v1.1 score: 4

Reference: ESMO Clinical Practice Guidelines - ESMO-Metastatic Breast Cancer [Ann Oncol (2021) VOLUME 32, ISSUE 12, P1475-1495, DECEMBER 01, 2021; DOI:https://doi.org/10.1016/j.annonc.2021.09.019]

BRCA1 K654Sfs*47 (continued)

olaparib

Cancer type: Castration-Resistant Prostate Cancer **Variant class:** BRCA1 mutation

ESMO Level of Evidence/Grade of Recommendation: I / B

Population segment (Line of therapy):
- Metastatic, Progression (Line of therapy not specified)

Reference: ESMO Clinical Practice Guidelines - ESMO-Cancer of the Prostate [Ann Oncol (2020)]

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bevacizumab + olaparib

Cancer type: Ovarian Cancer **Variant class:** BRCA mutation or HR Deficient

ESMO Level of Evidence/Grade of Recommendation: I / A

Population segment (Line of therapy):
- Epithelial; Relapsed (Maintenance therapy); ESMO-MCBS v1.1 score: 3

Reference: ESMO Clinical Practice Guidelines - ESMO-Newly Diagnosed and Relapsed Epithelial Ovarian Carcinoma [Ann Oncol 2013; 24 (Suppl 6): vi24-vi32. (eUpdate: 19 July 2021, 01 April 2020, 21 September 2016; Corrigendum: 03 October 2018)]

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niraparib

Cancer type: Ovarian Cancer **Variant class:** BRCA mutation or HR Deficient

ESMO Level of Evidence/Grade of Recommendation: I / A

Population segment (Line of therapy):
- Epithelial; Relapsed (Maintenance therapy); ESMO-MCBS v1.1 score: 3

Reference: ESMO Clinical Practice Guidelines - ESMO-Newly Diagnosed and Relapsed Epithelial Ovarian Carcinoma [Ann Oncol 2013; 24 (Suppl 6): vi24-vi32. (eUpdate: 19 July 2021, 01 April 2020, 21 September 2016; Corrigendum: 03 October 2018)]

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olaparib

Cancer type: Ovarian Cancer **Variant class:** BRCA mutation

ESMO Level of Evidence/Grade of Recommendation: I / A

Population segment (Line of therapy):
- Epithelial; Relapsed (Maintenance therapy); ESMO-MCBS v1.1 score: 4

Reference: ESMO Clinical Practice Guidelines - ESMO-Newly Diagnosed and Relapsed Epithelial Ovarian Carcinoma [Ann Oncol 2013; 24 (Suppl 6): vi24-vi32. (eUpdate: 19 July 2021, 01 April 2020, 21 September 2016; Corrigendum: 03 October 2018)]

BRCA1 K654Sfs*47 (continued)

○ rucaparib

Cancer type: Ovarian Cancer **Variant class:** BRCA mutation

ESMO Level of Evidence/Grade of Recommendation: III / A

Population segment (Line of therapy):
- Epithelial; Recurrent (Line of therapy not specified)

Reference: ESMO Clinical Practice Guidelines - ESMO-Newly Diagnosed and Relapsed Epithelial Ovarian Carcinoma [Ann Oncol 2013; 24 (Suppl 6): vi24-vi32. (eUpdate: 19 July 2021, 01 April 2020, 21 September 2016; Corrigendum: 03 October 2018)]

BRCA2 K862Sfs*17

● olaparib

Cancer type: Breast Cancer **Variant class:** BRCA2 mutation

Other criteria: ERBB2 negative, ER positive

ESMO Level of Evidence/Grade of Recommendation: I / A

Population segment (Line of therapy):
- Luminal A; Advanced, Metastatic (Second-line therapy); ESMO-MCBS v1.1 score: 4

Reference: ESMO Clinical Practice Guidelines - ESMO-Metastatic Breast Cancer [Ann Oncol (2021) VOLUME 32, ISSUE 12, P1475-1495, DECEMBER 01, 2021; DOI:https://doi.org/10.1016/j.annonc.2021.09.019]

● talazoparib

Cancer type: Breast Cancer **Variant class:** BRCA2 mutation

Other criteria: ERBB2 negative, ER positive

ESMO Level of Evidence/Grade of Recommendation: I / A

Population segment (Line of therapy):
- Luminal A; Advanced, Metastatic (Second-line therapy); ESMO-MCBS v1.1 score: 4

Reference: ESMO Clinical Practice Guidelines - ESMO-Metastatic Breast Cancer [Ann Oncol (2021) VOLUME 32, ISSUE 12, P1475-1495, DECEMBER 01, 2021; DOI:https://doi.org/10.1016/j.annonc.2021.09.019]

BRCA2 K862Sfs*17 (continued)

olaparib

Cancer type: Castration-Resistant Prostate Cancer **Variant class:** BRCA2 mutation

ESMO Level of Evidence/Grade of Recommendation: I / B

Population segment (Line of therapy):
- Metastatic, Progression (Line of therapy not specified)

Reference: ESMO Clinical Practice Guidelines - ESMO-Cancer of the Prostate [Ann Oncol (2020)]

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bevacizumab + olaparib

Cancer type: Ovarian Cancer **Variant class:** BRCA mutation or HR Deficient

ESMO Level of Evidence/Grade of Recommendation: I / A

Population segment (Line of therapy):
- Epithelial; Relapsed (Maintenance therapy); ESMO-MCBS v1.1 score: 3

Reference: ESMO Clinical Practice Guidelines - ESMO-Newly Diagnosed and Relapsed Epithelial Ovarian Carcinoma [Ann Oncol 2013; 24 (Suppl 6): vi24-vi32. (eUpdate: 19 July 2021, 01 April 2020, 21 September 2016; Corrigendum: 03 October 2018)]

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niraparib

Cancer type: Ovarian Cancer **Variant class:** BRCA mutation or HR Deficient

ESMO Level of Evidence/Grade of Recommendation: I / A

Population segment (Line of therapy):
- Epithelial; Relapsed (Maintenance therapy); ESMO-MCBS v1.1 score: 3

Reference: ESMO Clinical Practice Guidelines - ESMO-Newly Diagnosed and Relapsed Epithelial Ovarian Carcinoma [Ann Oncol 2013; 24 (Suppl 6): vi24-vi32. (eUpdate: 19 July 2021, 01 April 2020, 21 September 2016; Corrigendum: 03 October 2018)]

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olaparib

Cancer type: Ovarian Cancer **Variant class:** BRCA mutation

ESMO Level of Evidence/Grade of Recommendation: I / A

Population segment (Line of therapy):
- Epithelial; Relapsed (Maintenance therapy); ESMO-MCBS v1.1 score: 4

Reference: ESMO Clinical Practice Guidelines - ESMO-Newly Diagnosed and Relapsed Epithelial Ovarian Carcinoma [Ann Oncol 2013; 24 (Suppl 6): vi24-vi32. (eUpdate: 19 July 2021, 01 April 2020, 21 September 2016; Corrigendum: 03 October 2018)]

BRCA2 K862Sfs*17 (continued)

○ rucaparib

Cancer type: Ovarian Cancer **Variant class:** BRCA mutation

ESMO Level of Evidence/Grade of Recommendation: III / A

Population segment (Line of therapy):
- Epithelial; Recurrent (Line of therapy not specified)

Reference: ESMO Clinical Practice Guidelines - ESMO-Newly Diagnosed and Relapsed Epithelial Ovarian Carcinoma [Ann Oncol 2013; 24 (Suppl 6): vi24-vi32. (eUpdate: 19 July 2021, 01 April 2020, 21 September 2016; Corrigendum: 03 October 2018)]

CHEK1 I471Vfs*17

○ bevacizumab + olaparib

Cancer type: Ovarian Cancer **Variant class:** HR Deficient

ESMO Level of Evidence/Grade of Recommendation: I / A

Population segment (Line of therapy):
- Epithelial; Relapsed (Maintenance therapy); ESMO-MCBS v1.1 score: 3

Reference: ESMO Clinical Practice Guidelines - ESMO-Newly Diagnosed and Relapsed Epithelial Ovarian Carcinoma [Ann Oncol 2013; 24 (Suppl 6): vi24-vi32. (eUpdate: 19 July 2021, 01 April 2020, 21 September 2016; Corrigendum: 03 October 2018)]

○ niraparib

Cancer type: Ovarian Cancer **Variant class:** HR Deficient

ESMO Level of Evidence/Grade of Recommendation: I / A

Population segment (Line of therapy):
- Epithelial; Relapsed (Maintenance therapy); ESMO-MCBS v1.1 score: 3

Reference: ESMO Clinical Practice Guidelines - ESMO-Newly Diagnosed and Relapsed Epithelial Ovarian Carcinoma [Ann Oncol 2013; 24 (Suppl 6): vi24-vi32. (eUpdate: 19 July 2021, 01 April 2020, 21 September 2016; Corrigendum: 03 October 2018)]

Relevant Therapy Summary

● In this cancer type ○ In other cancer type ◑ In this cancer type and other cancer types ✖ No evidence

PIK3CA H1047R

Relevant Therapy	FDA	NCCN	EMA	ESMO	Clinical Trials*
alpelisib + fulvestrant	●	●	●	●	✖

* Most advanced phase (IV, III, II/III, II, I/II, I) is shown and multiple clinical trials may be available.

Relevant Therapy Summary (continued)

● In this cancer type ○ In other cancer type ◑ In this cancer type and other cancer types ✖ No evidence

PIK3CA H1047R (continued)

Relevant Therapy	FDA	NCCN	EMA	ESMO	Clinical Trials*
alpelisib, hormone therapy	✖	✖	✖	✖	● (III)
inavolisib, palbociclib, hormone therapy	✖	✖	✖	✖	● (II/III)
alpelisib, hormone therapy, dapagliflozin	✖	✖	✖	✖	● (II)
atezolizumab + ipatasertib, atezolizumab + ipatasertib + chemotherapy	✖	✖	✖	✖	● (II)
Dapagliflozin + metformin, metformin hydrochloride, alpelisib, hormone therapy	✖	✖	✖	✖	● (II)
disitamab vedotin	✖	✖	✖	✖	● (II)
everolimus	✖	✖	✖	✖	● (II)
everolimus + chemotherapy	✖	✖	✖	✖	● (II)
inavolisib	✖	✖	✖	✖	● (II)
inavolisib, atezolizumab + ipatasertib	✖	✖	✖	✖	● (II)
ipatasertib	✖	✖	✖	✖	● (II)
samotolisib	✖	✖	✖	✖	● (II)
temsirolimus	✖	✖	✖	✖	● (II)
alpelisib + dalpiciclib	✖	✖	✖	✖	● (I/II)
copanlisib, nivolumab, ipilimumab	✖	✖	✖	✖	● (I/II)
hormone therapy, palbociclib, alpelisib, everolimus, abemaciclib	✖	✖	✖	✖	● (I/II)
ipatasertib, atezolizumab	✖	✖	✖	✖	● (I/II)
WXFL-10030390	✖	✖	✖	✖	● (I/II)
capivasertib, midazolam	✖	✖	✖	✖	● (I)
copanlisib, olaparib, durvalumab	✖	✖	✖	✖	● (I)
HH-CYH33, hormone therapy, palbociclib	✖	✖	✖	✖	● (I)
HH-CYH33, olaparib	✖	✖	✖	✖	● (I)
hormone therapy, alpelisib	✖	✖	✖	✖	● (I)
inavolisib, chemotherapy, trastuzumab, pertuzumab	✖	✖	✖	✖	● (I)

* Most advanced phase (IV, III, II/III, II, I/II, I) is shown and multiple clinical trials may be available.

Relevant Therapy Summary (continued)

● In this cancer type ○ In other cancer type ◑ In this cancer type and other cancer types ✖ No evidence

PIK3CA H1047R (continued)

Relevant Therapy	FDA	NCCN	EMA	ESMO	Clinical Trials*
inavolisib, palbociclib, hormone therapy, metformin hydrochloride	✖	✖	✖	✖	● (I)
LOXO-783, hormone therapy, abemaciclib	✖	✖	✖	✖	● (I)
palbociclib, gedatolisib	✖	✖	✖	✖	● (I)
paxalisib, radiation therapy	✖	✖	✖	✖	● (I)
RLY-2608	✖	✖	✖	✖	● (I)
serabelisib	✖	✖	✖	✖	● (I)
TPST-1495, pembrolizumab	✖	✖	✖	✖	● (I)

BRCA1 K654Sfs*47

Relevant Therapy	FDA	NCCN	EMA	ESMO	Clinical Trials*
olaparib	○	○	○	◑	● (II)
bevacizumab + olaparib	○	○	○	○	✖
rucaparib	○	○	○	○	✖
niraparib	○	○	✖	○	● (III)
talazoparib	✖	✖	✖	●	● (II)
chemotherapy, olaparib	✖	✖	✖	✖	● (III)
atezolizumab	✖	✖	✖	✖	● (II)
durvalumab, olaparib, hormone therapy	✖	✖	✖	✖	● (II)
durvalumab, tremelimumab, olaparib	✖	✖	✖	✖	● (II)
fluzoparib, tucidinostat, camrelizumab	✖	✖	✖	✖	● (II)
niraparib, hormone therapy	✖	✖	✖	✖	● (II)
olaparib, durvalumab	✖	✖	✖	✖	● (II)
olaparib, talazoparib, atezolizumab + talazoparib	✖	✖	✖	✖	● (II)
pamiparib, tislelizumab	✖	✖	✖	✖	● (II)
pembrolizumab, olaparib	✖	✖	✖	✖	● (II)
elimusertib	✖	✖	✖	✖	● (I/II)

* Most advanced phase (IV, III, II/III, II, I/II, I) is shown and multiple clinical trials may be available.

Relevant Therapy Summary (continued)

● In this cancer type ○ In other cancer type ◑ In this cancer type and other cancer types ✖ No evidence

BRCA1 K654Sfs*47 (continued)

Relevant Therapy	FDA	NCCN	EMA	ESMO	Clinical Trials*
olaparib, palbociclib, hormone therapy	✖	✖	✖	✖	● (I/II)
olaparib, radiation therapy, durvalumab, chemotherapy	✖	✖	✖	✖	● (I/II)
sacituzumab govitecan, berzosertib	✖	✖	✖	✖	● (I/II)
talazoparib, avelumab	✖	✖	✖	✖	● (I/II)
venadaparib	✖	✖	✖	✖	● (I/II)
berzosertib, chemotherapy	✖	✖	✖	✖	● (I)
cabozantinib, pamiparib	✖	✖	✖	✖	● (I)
ceralasertib, olaparib	✖	✖	✖	✖	● (I)
copanlisib, olaparib, durvalumab	✖	✖	✖	✖	● (I)
DAN-222, niraparib	✖	✖	✖	✖	● (I)
elimusertib, niraparib	✖	✖	✖	✖	● (I)
elimusertib, pembrolizumab	✖	✖	✖	✖	● (I)
HH-CYH33, olaparib	✖	✖	✖	✖	● (I)
HWH-340	✖	✖	✖	✖	● (I)
niraparib, dostarlimab	✖	✖	✖	✖	● (I)
RP12146	✖	✖	✖	✖	● (I)
talazoparib, palbociclib, axitinib, crizotinib	✖	✖	✖	✖	● (I)

BRCA2 K862Sfs*17

Relevant Therapy	FDA	NCCN	EMA	ESMO	Clinical Trials*
olaparib	○	○	○	◑	● (II)
bevacizumab + olaparib	○	○	○	○	✖
rucaparib	○	○	○	○	✖
niraparib	○	○	✖	○	● (III)
talazoparib	✖	✖	✖	●	● (II)
chemotherapy, olaparib	✖	✖	✖	✖	● (III)

* Most advanced phase (IV, III, II/III, II, I/II, I) is shown and multiple clinical trials may be available.

Relevant Therapy Summary (continued)

● In this cancer type ○ In other cancer type ◑ In this cancer type and other cancer types ✖ No evidence

BRCA2 K862Sfs*17 (continued)

Relevant Therapy	FDA	NCCN	EMA	ESMO	Clinical Trials*
atezolizumab	✖	✖	✖	✖	● (II)
durvalumab, olaparib, hormone therapy	✖	✖	✖	✖	● (II)
durvalumab, tremelimumab, olaparib	✖	✖	✖	✖	● (II)
fluzoparib, tucidinostat, camrelizumab	✖	✖	✖	✖	● (II)
niraparib, hormone therapy	✖	✖	✖	✖	● (II)
olaparib, durvalumab	✖	✖	✖	✖	● (II)
olaparib, talazoparib, atezolizumab + talazoparib	✖	✖	✖	✖	● (II)
pamiparib, tislelizumab	✖	✖	✖	✖	● (II)
pembrolizumab, olaparib	✖	✖	✖	✖	● (II)
elimusertib	✖	✖	✖	✖	● (I/II)
olaparib, palbociclib, hormone therapy	✖	✖	✖	✖	● (I/II)
olaparib, radiation therapy, durvalumab, chemotherapy	✖	✖	✖	✖	● (I/II)
sacituzumab govitecan, berzosertib	✖	✖	✖	✖	● (I/II)
talazoparib, avelumab	✖	✖	✖	✖	● (I/II)
venadaparib	✖	✖	✖	✖	● (I/II)
berzosertib, chemotherapy	✖	✖	✖	✖	● (I)
cabozantinib, pamiparib	✖	✖	✖	✖	● (I)
ceralasertib, olaparib	✖	✖	✖	✖	● (I)
copanlisib, olaparib, durvalumab	✖	✖	✖	✖	● (I)
DAN-222, niraparib	✖	✖	✖	✖	● (I)
elimusertib, niraparib	✖	✖	✖	✖	● (I)
elimusertib, pembrolizumab	✖	✖	✖	✖	● (I)
HH-CYH33, olaparib	✖	✖	✖	✖	● (I)
HWH-340	✖	✖	✖	✖	● (I)
niraparib, dostarlimab	✖	✖	✖	✖	● (I)
RP12146	✖	✖	✖	✖	● (I)

* Most advanced phase (IV, III, II/III, II, I/II, I) is shown and multiple clinical trials may be available.

Relevant Therapy Summary (continued)

● In this cancer type ○ In other cancer type ◑ In this cancer type and other cancer types ✖ No evidence

BRCA2 K862Sfs*17 (continued)

Relevant Therapy	FDA	NCCN	EMA	ESMO	Clinical Trials*
talazoparib, palbociclib, axitinib, crizotinib	✖	✖	✖	✖	● (I)

CHEK1 I471Vfs*17

Relevant Therapy	FDA	NCCN	EMA	ESMO	Clinical Trials*
niraparib	○	○	✖	○	● (II)
olaparib	○	○	✖	✖	● (II)
bevacizumab + olaparib	✖	✖	✖	○	✖
chemotherapy, olaparib	✖	✖	✖	✖	● (III)
atezolizumab	✖	✖	✖	✖	● (II)
durvalumab, olaparib, hormone therapy	✖	✖	✖	✖	● (II)
durvalumab, tremelimumab, olaparib	✖	✖	✖	✖	● (II)
fluzoparib, tucidinostat, camrelizumab	✖	✖	✖	✖	● (II)
niraparib, hormone therapy	✖	✖	✖	✖	● (II)
pamiparib, tislelizumab	✖	✖	✖	✖	● (II)
pembrolizumab, olaparib	✖	✖	✖	✖	● (II)
talazoparib	✖	✖	✖	✖	● (II)
elimusertib	✖	✖	✖	✖	● (I/II)
sacituzumab govitecan, berzosertib	✖	✖	✖	✖	● (I/II)
venadaparib	✖	✖	✖	✖	● (I/II)
berzosertib, chemotherapy	✖	✖	✖	✖	● (I)
cabozantinib, pamiparib	✖	✖	✖	✖	● (I)
copanlisib, olaparib, durvalumab	✖	✖	✖	✖	● (I)
DAN-222, niraparib	✖	✖	✖	✖	● (I)
elimusertib, niraparib	✖	✖	✖	✖	● (I)
elimusertib, pembrolizumab	✖	✖	✖	✖	● (I)
HH-CYH33, olaparib	✖	✖	✖	✖	● (I)

* Most advanced phase (IV, III, II/III, II, I/II, I) is shown and multiple clinical trials may be available.

Relevant Therapy Summary (continued)

● In this cancer type ○ In other cancer type ◑ In this cancer type and other cancer types ✖ No evidence

CHEK1 I471Vfs*17 (continued)

Relevant Therapy	FDA	NCCN	EMA	ESMO	Clinical Trials*
RP12146	✖	✖	✖	✖	● (I)
talazoparib, palbociclib, axitinib, crizotinib	✖	✖	✖	✖	● (I)

ERBB2 I655V

Relevant Therapy	FDA	NCCN	EMA	ESMO	Clinical Trials*
trastuzumab deruxtecan	✖	○	✖	✖	✖
ado-trastuzumab emtansine	✖	✖	✖	✖	● (II)
ado-trastuzumab emtansine + atezolizumab, pertuzumab/trastuzumab/hyaluronidase-zzxf, pertuzumab/trastuzumab/hyaluronidase-zzxf + chemotherapy, ado-trastuzumab emtansine + irbinitinib	✖	✖	✖	✖	● (II)
afatinib	✖	✖	✖	✖	● (II)
atezolizumab + pertuzumab + trastuzumab	✖	✖	✖	✖	● (II)
atezolizumab, cobimetinib, chemotherapy	✖	✖	✖	✖	● (II)
irbinitinib, trastuzumab	✖	✖	✖	✖	● (II)
pertuzumab + trastuzumab	✖	✖	✖	✖	● (II)
pertuzumab + trastuzumab, irbinitinib + trastuzumab	✖	✖	✖	✖	● (II)
pyrotinib	✖	✖	✖	✖	● (II)
pyrotinib + chemotherapy	✖	✖	✖	✖	● (II)
trastuzumab, pertuzumab, ado-trastuzumab emtansine, lapatinib	✖	✖	✖	✖	● (II)
ORIC-114	✖	✖	✖	✖	● (I/II)
pertuzumab + trastuzumab + chemotherapy, trastuzumab + chemotherapy	✖	✖	✖	✖	● (I/II)
ARX-788	✖	✖	✖	✖	● (I)
BI-1810631	✖	✖	✖	✖	● (I)
KN026, KN046	✖	✖	✖	✖	● (I)
neratinib, palbociclib, everolimus, trametinib	✖	✖	✖	✖	● (I)

* Most advanced phase (IV, III, II/III, II, I/II, I) is shown and multiple clinical trials may be available.

Relevant Therapy Summary (continued)

● In this cancer type ○ In other cancer type ◑ In this cancer type and other cancer types ✖ No evidence

ERBB2 I655V (continued)

Relevant Therapy	FDA	NCCN	EMA	ESMO	Clinical Trials*
SAR-443216	✖	✖	✖	✖	● (I)
SHR-A1811	✖	✖	✖	✖	● (I)
TAS 2940	✖	✖	✖	✖	● (I)

FGFR4 G388R

Relevant Therapy	FDA	NCCN	EMA	ESMO	Clinical Trials*
erdafitinib	✖	✖	✖	✖	● (II)
hormone therapy, anlotinib hydrochloride	✖	✖	✖	✖	● (II)
ICP-192	✖	✖	✖	✖	● (II)
infigratinib	✖	✖	✖	✖	● (II)
ponatinib	✖	✖	✖	✖	● (II)
anlotinib hydrochloride	✖	✖	✖	✖	● (I)
BPI-17509	✖	✖	✖	✖	● (I)
E-7090, hormone therapy	✖	✖	✖	✖	● (I)
FH-2001	✖	✖	✖	✖	● (I)
futibatinib, pembrolizumab	✖	✖	✖	✖	● (I)
infigratinib, hormone therapy	✖	✖	✖	✖	● (I)

TSC2 c.482-3C>T

Relevant Therapy	FDA	NCCN	EMA	ESMO	Clinical Trials*
atezolizumab + ipatasertib, atezolizumab + ipatasertib + chemotherapy	✖	✖	✖	✖	● (II)
disitamab vedotin	✖	✖	✖	✖	● (II)
everolimus	✖	✖	✖	✖	● (II)
everolimus + chemotherapy	✖	✖	✖	✖	● (II)
nab-rapamycin (Abraxis)	✖	✖	✖	✖	● (II)
samotolisib	✖	✖	✖	✖	● (II)

* Most advanced phase (IV, III, II/III, II, I/II, I) is shown and multiple clinical trials may be available.

Relevant Therapy Summary (continued)

● In this cancer type ○ In other cancer type ◑ In this cancer type and other cancer types ✖ No evidence

TSC2 c.482-3C>T (continued)

Relevant Therapy	FDA	NCCN	EMA	ESMO	Clinical Trials*
temsirolimus	✖	✖	✖	✖	● (II)
alpelisib + dalpiciclib	✖	✖	✖	✖	● (I/II)
ipatasertib, atezolizumab	✖	✖	✖	✖	● (I/II)
capivasertib, midazolam	✖	✖	✖	✖	● (I)

PMS2 K541Efs*3

Relevant Therapy	FDA	NCCN	EMA	ESMO	Clinical Trials*
atezolizumab	✖	✖	✖	✖	● (II)
ipilimumab + nivolumab	✖	✖	✖	✖	● (II)
niraparib	✖	✖	✖	✖	● (II)
olaparib	✖	✖	✖	✖	● (II)
berzosertib, chemotherapy	✖	✖	✖	✖	● (I)
elimusertib, niraparib	✖	✖	✖	✖	● (I)
elimusertib, pembrolizumab	✖	✖	✖	✖	● (I)
nivolumab, ipilimumab	✖	✖	✖	✖	● (I)
RP12146	✖	✖	✖	✖	● (I)
talazoparib, palbociclib, axitinib, crizotinib	✖	✖	✖	✖	● (I)

CCND1 amplification

Relevant Therapy	FDA	NCCN	EMA	ESMO	Clinical Trials*
abemaciclib	✖	✖	✖	✖	● (II)
palbociclib	✖	✖	✖	✖	● (II)
siremadlin, ribociclib	✖	✖	✖	✖	● (II)
tegatrabetan	✖	✖	✖	✖	● (I/II)
PF-07220060	✖	✖	✖	✖	● (I)

* Most advanced phase (IV, III, II/III, II, I/II, I) is shown and multiple clinical trials may be available.

Relevant Therapy Summary (continued)

● In this cancer type ○ In other cancer type ◑ In this cancer type and other cancer types ✖ No evidence

FGF19 amplification

Relevant Therapy	FDA	NCCN	EMA	ESMO	Clinical Trials*
ICP-192	✖	✖	✖	✖	● (II)
BPI-43487	✖	✖	✖	✖	● (I)
futibatinib, pembrolizumab	✖	✖	✖	✖	● (I)

FGF3 amplification

Relevant Therapy	FDA	NCCN	EMA	ESMO	Clinical Trials*
ICP-192	✖	✖	✖	✖	● (II)
futibatinib, pembrolizumab	✖	✖	✖	✖	● (I)

* Most advanced phase (IV, III, II/III, II, I/II, I) is shown and multiple clinical trials may be available.

Alerts Informed By Public Data Sources

Current FDA Information

Contraindicated Not recommended Resistance Breakthrough Fast Track

FDA information is current as of 2022-06-15. For the most up-to-date information, search www.fda.gov.

BRCA1 K654Sfs*47

pidnarulex

Cancer type: Breast Cancer, Ovarian Cancer

Variant class: HR Deficient

Supporting Statement:
The FDA has granted Fast Track Designation to the small molecule inhibitor, pidnarulex for BRCA1/2, PALB2, or other HRD mutations in breast and ovarian cancers.

Reference:

https://www.senhwabio.com//en/news/20220125

BRCA2 K862Sfs*17

pidnarulex

Cancer type: Breast Cancer, Ovarian Cancer **Variant class:** HR Deficient

Supporting Statement:
The FDA has granted Fast Track Designation to the small molecule inhibitor, pidnarulex for BRCA1/2, PALB2, or other HRD mutations in breast and ovarian cancers.

Reference:

https://www.senhwabio.com//en/news/20220125

CHEK1 I471Vfs*17

pidnarulex

Cancer type: Breast Cancer, Ovarian Cancer **Variant class:** HR Deficient

Supporting Statement:
The FDA has granted Fast Track Designation to the small molecule inhibitor, pidnarulex for BRCA1/2, PALB2, or other HRD mutations in breast and ovarian cancers.

Reference:

https://www.senhwabio.com//en/news/20220125

ERBB2 I655V

trastuzumab deruxtecan

Cancer type: Non-Small Cell Lung Cancer **Variant class:** ERBB2 mutation

Supporting Statement:
The FDA has granted Breakthrough Designation for the HER2-directed antibody drug conjugate, Enhertu (trastuzumab deruxtecan), for the treatment of HER2 mutated metastatic non-small cell lung cancer (NSCLC) with disease progression on or after platinum-based therapy.

Reference:

https://www.astrazeneca.com/media-centre/press-releases/2020/enhertu-granted-breakthrough-therapy-designation-in-the-us-for-her2-mutant-metastatic-non-small-cell-lung-cancer.html

ERBB2 I655V (continued)

BDTX-189

Cancer type: Solid Tumor **Variant class:** ERBB2 mutation

Supporting Statement:
The FDA has granted Fast Track Designation to BDTX-189 for solid tumors harboring a HER2 mutation or an EGFR or HER2 exon 20 insertion after progression on prior therapy.

Reference:

https://investors.blackdiamondtherapeutics.com/news-releases/news-release-details/black-diamond-therapeutics-granted-fast-track-designation-fda

Current NCCN Information

Contraindicated Not recommended Resistance Breakthrough Fast Track

NCCN information is current as of 2022-06-01. For the most up-to-date information, search www.nccn.org.
For NCCN International Adaptations & Translations, search www.nccn.org/global/international_adaptations.aspx.

BRCA1 K654Sfs*47

bevacizumab

Cancer type: Ovarian Cancer **Variant class:** BRCA1 mutation

Summary:

NCCN Guidelines® include the following supporting statement(s):

- "bevacizumab monotherapy is no longer recommended for patients with BRCA1/2 mutations"

Reference: NCCN Guidelines® - NCCN-Ovarian Cancer [Version 1.2022]

BRCA2 K862Sfs*17

bevacizumab

Cancer type: Ovarian Cancer **Variant class:** BRCA2 mutation

Summary:

NCCN Guidelines® include the following supporting statement(s):

- "bevacizumab monotherapy is no longer recommended for patients with BRCA1/2 mutations"

Reference: NCCN Guidelines® - NCCN-Ovarian Cancer [Version 1.2022]

ERBB2 I655V

afatinib

Cancer type: Non-Small Cell Lung Cancer **Variant class:** ERBB2 mutation

Summary:

NCCN Guidelines® include the following supporting statement(s):

- "The NCCN NSCLC Panel does not recommend single-agent therapy with trastuzumab or afatinib for patients with ERBB2 mutations, because response rates are lower and treatment is less effective with these agents."

Reference: NCCN Guidelines® - NCCN-Non-Small Cell Lung Cancer [Version 3.2022]

trastuzumab

Cancer type: Non-Small Cell Lung Cancer **Variant class:** ERBB2 mutation

Summary:

NCCN Guidelines® include the following supporting statement(s):

- "The NCCN NSCLC Panel does not recommend single-agent therapy with trastuzumab or afatinib for patients with ERBB2 mutations, because response rates are lower and treatment is less effective with these agents."

Reference: NCCN Guidelines® - NCCN-Non-Small Cell Lung Cancer [Version 3.2022]

Current Clinical Trials Information

Clinical Trials information is current as of 2022-06-01. For the most up-to-date information regarding a particular trial, search www.clinicaltrials.gov by NCT ID or search local clinical trials authority website by local identifier listed in 'Other identifiers'.

BRCA1 K654Sfs*47 + BRCA2 K862Sfs*17 + CHEK1 I471Vfs*17

NCT03025035

Open Label, Phase II Pilot Study of Immune Checkpoint Inhibition With Pembrolizumab in Combination With PARP Inhibition With Olaparib in Advanced BRCA-mutated or HDR-defect Breast Cancers

Cancer type: Breast Cancer

Variant classes: BRCA mutation & HR Deficient

Other identifier: IIT2015-18-Mita-MK3475

Population segments: BRCA, Estrogen receptor positive, HER2 negative, HER2 positive, Progesterone receptor positive, Second line, Stage III, Stage IV, Triple receptor negative

Phase: II

Therapies: pembrolizumab, olaparib

Location: United States

US State: CA

Contact: Parisa Mirzadehgan [310-967-4387; Parisa.Mirzadehgan@cshs.org]

BRCA1 K654Sfs*47 + BRCA2 K862Sfs*17 + CHEK1 I471Vfs*17 (continued)

NCT04826341
A Phase I/II Study of Sacituzumab Govitecan Plus Berzosertib in Small Cell Lung Cancer and Homologous Recombination-Deficient Cancers Resistant to PARP Inhibitors

Cancer type: Unspecified Solid Tumor

Variant classes: CHEK1 mutation & HR Deficient

Other identifiers: 000144-C, 10000144

Population segments: BRCA, Pulmonary, Second line, Stage III, Stage IV

Phase: I/II

Therapies: sacituzumab govitecan, berzosertib

Location: United States

US State: MD

Contact: Rasa Vilimas [240-858-3158; rasa.vilimas@nih.gov]

PIK3CA H1047R

NCT05038735
EPIK-B5: A Phase III, Randomized, Double-blind, Placebo-controlled Study of Alpelisib in Combination With Fulvestrant for Men and Postmenopausal Women With HR-positive, HER2-negative Advanced Breast Cancer With a PIK3CA Mutation, Who Progressed on or After Aromatase Inhibitor and a CDK4/6 Inhibitor

Cancer type: Breast Cancer

Variant class: PIK3CA H1047R mutation

Other inclusion criteria: ERBB2 negative, Hormone receptor positive

Other identifiers: CBYL719C2303, EPIK-B5, EudraCT Number: 2021-001966-39, IRAS ID: 304257

Population segments: Estrogen receptor positive, HER2 negative, Progesterone receptor positive, Second line, Stage III, Stage IV

Phase: III

Therapies: alpelisib, hormone therapy

Locations: Belgium, Bulgaria, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Italy, Portugal, Slovakia, Spain

No NCT ID - see other identifier(s)
BCT 1901 (CAPTURE): A Phase II Randomised Study To Evaluate Alpelisib Plus Fulvestrant Versus Capecitabine In Oestrogen Receptor Positive, HER2-Negative Advanced Breast Cancer Patients With PIK3CA Mutant Circulating DNA.

Cancer type: Breast Cancer

Variant class: PIK3CA H1047R mutation

Other inclusion criteria: ERBB2 negative, ER positive

Other identifiers: ACTRN12619001117101, BCT 1901, BCT 1901 (CAPTURE), CAPTURE

Population segments: Estrogen receptor positive, HER2 negative, Second line, Stage III, Stage IV

Phase: II

Therapies: alpelisib, hormone therapy

Location: Australia

PIK3CA H1047R (continued)

NCT05307705
A Study of LOXO-783 Administered as Monotherapy and in Combination With Anticancer Therapies for Patients With Advanced Breast Cancer and Other Solid Tumors With a PIK3CA H1047R Mutation

Cancer type: Breast Cancer

Variant class: PIK3CA H1047R mutation

Other inclusion criteria: ERBB2 negative, ER positive

Other identifiers: EudraCT Number : 2022-000175-40, J4C-OX-JZUA, LOXO-PIK-21001

Population segments: Estrogen receptor positive, HER2 negative, Stage III, Stage IV, Third line

Phase: I

Therapies: LOXO-783, hormone therapy, abemaciclib

Location: United States

US States: MA, NY, TN, TX

Contact: Patient Advocacy [833-569-6745; clinicaltrials@loxooncology.com;]

NCT04586335
Open Label, Phase Ib Study to Evaluate the Safety, Tolerability, Pharmacokinetics and Clinical Activity of CYH33, an Oral a-specific PI3K Inhibitor in Combination With Olaparib, an Oral PARP Inhibitor in Patients With Advanced Solid Tumors.

Cancer type: Breast Cancer

Variant class: PIK3CA H1047 mutation

Other identifiers: CTR20202339, CYH33-G102

Population segments: BRCA, Second line, Stage III, Stage IV

Phase: I

Therapies: HH-CYH33, olaparib

Locations: Australia, United States

US State: TX

Contact: Dr. Jason Sudia [908-380-1329; jason.sudia@haihepharma.com]

NCT05216432
A First-in-Human Study of Mutant-selective PI3Ka Inhibitor, RLY-2608, as a Single Agent in Advanced Solid Tumor Patients and in Combination With Fulvestrant in Patients With Advanced Breast Cancer

Cancer type: Breast Cancer

Variant class: PIK3CA H1047 mutation

Other identifier: RLY-2608-101

Population segments: Estrogen receptor positive, HER2 negative, Progesterone receptor positive, Second line, Stage III, Stage IV

Phase: I

Therapy: RLY-2608

Location: United States

US States: CO, FL, MA, TN, TX, VA

Contact: Relay Therapeutics Inc [617-322-0731; ClinicalTrials@relaytx.com]

PIK3CA H1047R (continued)

NCT05025735
Alpelisib, Fulvestrant and Dapagliflozin for the Treatment of HR+, HER2 -, PIK3CA Mutant Metastatic Breast Cancer

Cancer type: Breast Cancer

Variant class: PIK3CA activating mutation

Other inclusion criteria: ERBB2 negative, Hormone receptor positive

Other identifier: CBYL719A0US03T

Population segments: Estrogen receptor positive, HER2 negative, Progesterone receptor positive, Second line, Stage III, Stage IV

Phase: II

Therapies: alpelisib, hormone therapy, dapagliflozin

Location: United States

US State: MO

Contact: Kelley Aldrich [816-932-2677; slci1research@saint-lukes.org]

NCT04191499
A Phase III, Randomized, Double-Blind, Placebo-Controlled Study Evaluating the Efficacy and Safety of GDC-0077 Plus Palbociclib and Fulvestrant Versus Placebo Plus Palbociclib and Fulvestrant in Patients With PIK3CA-Mutant, Hormone Receptor-Positive, Her2-Negative, Locally Advanced or Metastatic Breast Cancer

Cancer type: Breast Cancer

Variant class: PIK3CA mutation

Other inclusion criteria: ERBB2 negative, Hormone receptor positive

Other identifiers: CTR20202249, EudraCT Number: 2019-002455-42, INAVO120, IRAS ID: 273402, NCI-2020-02312, WO41554

Population segments: Estrogen receptor positive, First line, HER2 negative, Progesterone receptor positive, Stage III, Stage IV

Phase: II/III

Therapies: inavolisib, palbociclib, hormone therapy

Locations: Australia, Belgium, Canada, China, Denmark, France, Germany, Greece, Hong Kong, Hungary, Italy, New Zealand, Poland, Portugal, Republic of Korea, Russian Federation, Singapore, Spain, Taiwan, Thailand, Turkey, Ukraine, United Kingdom, United States

US States: AZ, FL, GA, MA, NC, NY, TX, WA

Contact: Reference Study ID Number: WO41554 [888-662-6728; global-roche-genentech-trials@gene.com]

NCT04524000
A Phase II Open-label, 2-Part, Multi-center Study of BYL719 (Alpelisib) in Combination With Fulvestrant for Men and Postmenopausal Women With PIK3CA Mutation Hormone Receptor (HR) Positive, HER2-negative, Advanced Breast Cancer Which Progressed on or After Aromatase Inhibitor (AI) Treatment in Japan

Cancer type: Breast Cancer

Variant class: PIK3CA mutation

Other inclusion criteria: ERBB2 negative, Hormone receptor positive

Other identifiers: CBYL719C1201, JapicCTI-205438

Population segments: Estrogen receptor positive, HER2 negative, Progesterone receptor positive, Second line, Stage III, Stage IV

Phase: II

Therapies: alpelisib, hormone therapy

Location: Japan

PIK3CA H1047R (continued)

NCT04544189
A Phase II Randomized Double-blind, Placebo-controlled Study of Alpelisib in Combination With Fulvestrant for Chinese Men and Postmenopausal Women With Hormone Receptor Positive, HER2-negative, PIK3CA Mutant Advanced Breast Cancer Which Progressed on or After Aromatase Inhibitor (AI) Treatment, Including a Subset With Pharmacokinetic Analysis

Cancer type: Breast Cancer

Variant class: PIK3CA mutation

Other inclusion criteria: ERBB2 negative, Hormone receptor positive

Other identifiers: CBYL719C2201, CTR20200953

Population segments: Estrogen receptor positive, HER2 negative, HER2 positive, Progesterone receptor positive, Second line, Stage III, Stage IV, Triple receptor negative

Phase: II

Therapies: alpelisib, hormone therapy

Location: China

NCT04762979
A Phase II, Single Arm, Non-randomized Study of Alpelisib (BYL719) in Combination With Continued Endocrine Therapy Following Progression on Endocrine Therapy in Hormone Receptor Positive, HER2 Negative, PIK3CA Mutant Metastatic Breast Cancer

Cancer type: Breast Cancer

Variant class: PIK3CA mutation

Other inclusion criteria: ERBB2 negative, Hormone receptor positive

Other identifiers: 2020-1362, BTCRC-BRE19-409, NCI-2021-01727,, UW20118

Population segments: Estrogen receptor positive, HER2 negative, Progesterone receptor positive, Second line, Stage III, Stage IV, Third line

Phase: II

Therapies: alpelisib, hormone therapy

Location: United States

US States: IL, PA, WI

Contact: Dr. Kari Wisinski [608-262-2876; kbwisinski@medicine.wisc.edu]

NCT04862143
Open-label, Multicenter, Pilot-trial Evaluating the Safety and Utility of a Hybrid Decentralized Clinical Trial (DCT) Approach Using a TELEmedicine Platform in Patients With HR-positive/HER2-negative Advanced Breast Cancer With a PIK3CA Mutation Treated With Alpelisib - Fulvestrant TELEPIK Trial

Cancer type: Breast Cancer

Variant class: PIK3CA mutation

Other inclusion criteria: ERBB2 negative, Hormone receptor positive

Other identifiers: CBYL719A03201, EudraCT Number: 2020-005882-15, TELEPIK

Population segments: Estrogen receptor positive, HER2 negative, Progesterone receptor positive, Second line, Stage III, Stage IV

Phase: II

Therapies: alpelisib, hormone therapy

Location: Sweden

PIK3CA H1047R (continued)

NCT04899349
EPIK-B4: A Phase II, Multicenter, Randomized, Open-label, Active-controlled Study to Assess the Safety and Efficacy of Dapagliflozin + Metformin XR Versus Metformin During Treatment With Alpelisib (BYL719) in Combination With Fulvestrant in Participants With HR+, HER2-, Advanced Breast Cancer With a PIK3CA Mutation Following Progression on/After Endocrine-based Therapy.

Cancer type: Breast Cancer

Variant class: PIK3CA mutation

Other inclusion criteria: ERBB2 negative, Hormone receptor positive

Other identifiers: CBYL719C2202, CTRI/2022/02/040589, EPIK-B4, EudraCT Number:2021-001908-15, PHRR220202-004297

Population segments: Estrogen receptor positive, First line, HER2 negative, Progesterone receptor positive, Stage III, Stage IV

Phase: II

Therapies: Dapagliflozin + metformin, metformin hydrochloride, alpelisib, hormone therapy

Locations: Hong Kong, United States

US States: AK, CA, CO, GA, MO, MT, NJ, TX, VA, WA

Contact: Novartis Pharmaceuticals [888-669-6682; novartis.email@novartis.com]

NCT03284957
A Phase I/II Study for the Safety, Efficacy, Pharmacokinetic and Pharmacodynamics Evaluation of SAR439859, Administered Orally as Monotherapy, Then in Combination With Other Anti-cancer Therapies in Postmenopausal Women With Estrogen Receptor-positive Advanced Breast Cancer (AMEERA-1).

Cancer type: Breast Cancer

Variant class: PIK3CA mutation

Other inclusion criteria: ERBB2 negative, ER positive

Other identifiers: 17-371, 17-658, 20171553, 26R / 2018, AMEERA-1, EudraCT Number: 2017-000690-36, NCI-2017-01882, Pro00084301, TED14, TED14856, U1111-1189-4896

Population segments: Estrogen receptor positive, Fourth line or greater, HER2 negative, Second line, Stage III, Stage IV, Third line

Phase: I/II

Therapies: hormone therapy, palbociclib, alpelisib, everolimus, abemaciclib

Locations: Belgium, Canada, Czech Republic, France, Italy, Poland, Portugal, Spain, United Kingdom, United States

US States: CO, MA, NY, WA

Contact: Trial Transparency email recommended (Toll free number for US & Canada) [800-633-1610 ext 1 then #; Contact-Us@sanofi.com]

NCT04856371
A Multicenter, Open-label, Phase Ib Study to Evaluate the Safety, Tolerability, Pharmacokinetics and Preliminary Efficacy of CYH33 in Combination With Endocrine Therapy With or Without Palbociclib in Patients With PIK3CA Mutant, HR+, HER2- Advanced Breast Cancer.

Cancer type: Breast Cancer

Variant class: PIK3CA mutation

Other inclusion criteria: ERBB2 negative, Hormone receptor positive

Other identifiers: CTR20210627, CYH33-G103

Population segments: Estrogen receptor positive, HER2 negative, Progesterone receptor positive, Second line, Stage III, Stage IV

Phase: I

Therapies: HH-CYH33, hormone therapy, palbociclib

Location: China

PIK3CA H1047R (continued)

NCT04188548
EMBER: A Phase Ia/Ib Study of LY3484356 Administered as Monotherapy and in Combination With Anticancer Therapies for Patients With ER+ Locally Advanced or Metastatic Breast Cancer and Other Select Non-Breast Cancers

Cancer type: Breast Cancer

Variant class: PIK3CA mutation

Other inclusion criteria: ERBB2 negative, ER positive

Other identifiers: 17502, 20-118, EMBER, EudraCT Number: 2019-003581-41, J2J-MC-JZLA, J2J-MC-JZLA(b), jRCT2031200271

Population segments: Estrogen receptor positive, Fourth line or greater, HER2 negative, HER2 positive, Second line, Stage III, Stage IV, Third line

Phase: I

Therapies: hormone therapy, alpelisib

Locations: Australia, Belgium, France, Japan, Republic of Korea, Spain, Taiwan, United States

US States: AR, AZ, CA, CO, FL, GA, IN, MA, MD, MN, MO, NC, NY, OH, OK, OR, PA, TN, TX, VA, VT, WA

Contact: Eli Lilly and Company [877-285-4559; Clinicaltrials.gov@lilly.com]

NCT03006172
A Phase I, Open-Label, Dose-Escalation Study Evaluating the Safety, Tolerability, and Pharmacokinetics of Inavolisib as a Single Agent in Patients With Locally Advanced or Metastatic PIK3CA-Mutant Solid Tumors and in Combination With Endocrine and Targeted Therapies in Patients With Locally Advanced or Metastatic PIK3CA-Mutant Breast Cancer

Cancer type: Breast Cancer

Variant class: PIK3CA mutation

Other inclusion criteria: ERBB2 negative, Hormone receptor positive

Other identifiers: 16-1556, 16-521, EudraCT Number: 2016-003022-17, GO39374, NCI-2017-00262

Population segments: Estrogen receptor positive, HER2 negative, Progesterone receptor positive, Second line, Stage III, Stage IV

Phase: I

Therapies: inavolisib, palbociclib, hormone therapy, metformin hydrochloride

Locations: Canada, France, Spain, United Kingdom, United States

US States: MA, NY, TN

Contact: Reference Study ID Number: GO39374 [888-662-6728; global-roche-genentech-trials@gene.com]

NCT05331326
A Multicenter, Single Arm Phase II Clinical Study Evaluating the Efficacy and Safety of RC48-ADC for the Treatment of HER2-expression Metastatic Breast Cancer With Abnormal Activation of PAM Pathway

Cancer type: Breast Cancer

Variant class: PI3K/AKT/MTOR mutation

Other identifier: NCC3286

Population segments: HER2 positive, Second line, Stage III, Stage IV

Phase: II

Therapy: disitamab vedotin

Location: China

PIK3CA H1047R (continued)

NCT04355858
Precision Treatment of Luminal Advanced Breast Cancer Based on Molecular Subtyping

Cancer type: Breast Cancer

Variant class: PI3K/AKT/MTOR mutation

Other inclusion criteria: ERBB2 negative, Hormone receptor positive

Other identifiers: MULAN, SCHBCC-N029

Population segments: Estrogen receptor positive, HER2 negative, Progesterone receptor positive, Second line, Stage III, Stage IV, Third line

Phase: II

Therapy: everolimus + chemotherapy

Location: China

NCT04591431
The Rome Trial From Histology to Target: the Road to Personalize Target Therapy and Immunotherapy

Cancer type: Breast Cancer

Variant class: PI3K aberration

Other identifiers: EudraCT Number: 2018-002190-21, MAR-BAS-18-005, ROME

Population segments: Second line, Stage IV

Phase: II

Therapy: ipatasertib

Location: Italy

NCT04215003
This is a Phase Ib/II, Prospective , Open-label, Single Center, Bayesian Adaptive Design, Umbrella Study Evaluating the Efficacy and Safety of Neo-adjuvant Therapy in Patients With Breast Cancer

Cancer type: Breast Cancer

Variant class: PI3K/AKT/MTOR pathway

Other inclusion criteria: ERBB2 negative, Hormone receptor positive

Other identifier: SCHBCC0N026

Population segments: Estrogen receptor positive, HER2 negative, HER2 positive, Neoadjuvant, Progesterone receptor positive, Stage II, Stage III

Phase: I/II

Therapy: alpelisib + dalpiciclib

Location: China

NCT04317105
A Phase I/II Biomarker Driven Combination Trial of Copanlisib and Immune Checkpoint Inhibitors in Patients With Advanced Solid Tumors

Cancer type: Unspecified Solid Tumor

Variant class: PIK3CA H1047 mutation

Other identifiers: (BACON), 10221, 2019-1046, NCI-2020-01917, NCI10221

Population segments: Second line, Stage III, Stage IV

Phase: I/II

Therapies: copanlisib, nivolumab, ipilimumab

Locations: Canada, United States

US States: MA, TX, VA

Contact: Multiple contacts: See www.clinicaltrials.gov for complete list of contacts.

PIK3CA H1047R (continued)

NCT04551521
Continuous ReAssessment With Flexible ExTension in Rare Malignancies - CRAFT: The NCT-PMO-1602 Phase II Trial

Cancer type: Unspecified Solid Tumor

Variant class: PIK3CA activating mutation

Other identifiers: CRAFT, EudraCT Number: 2019-003192-18, NCT-PMO-1602, NCT/DKTK MASTER

Population segments: ALK, BRAF, HER2 positive, Second line, Stage III, Stage IV

Phase: II

Therapies: atezolizumab + ipatasertib, atezolizumab + ipatasertib + chemotherapy

Location: Germany

NCT04632992
MyTACTIC: An Open-Label Phase II Study Evaluating Targeted Therapies in Patients Who Have Advanced Solid Tumors With Genomic Alterations or Protein Expression Patterns Predictive of Response

Cancer type: Unspecified Solid Tumor

Variant class: PIK3CA activating mutation

Other identifiers: ML42439, MyTACTIC

Population segments: ALK, EGFR, HER2 negative, HER2 positive, Line of therapy N/A, Stage III, Stage IV

Phase: II

Therapies: inavolisib, atezolizumab + ipatasertib

Location: United States

US States: AK, AL, AR, AZ, CA, CT, FL, ID, LA, MD, MI, MO, MT, NC, NE, NJ, NY, OH, OR, TN, TX, VA, WA

Contact: Reference Study ID Number: ML42439 [888-662-6728; global-roche-genentech-trials@gene.com]

NCT03673787
Ice-CAP: A Phase I Trial of Ipatasertib in Combination With Atezolizumab in Patients With Advanced Solid Tumours With PI3K Pathway Hyperactivation.

Cancer type: Unspecified Solid Tumor

Variant class: PIK3CA activating mutation

Other identifiers: CCR4720, EudraCT Number: 2017-003005-18, IceCAP, Ice-CAP, IRAS ID 233461

Population segments: Hormone refractory, Second line, Stage III, Stage IV

Phase: I/II

Therapies: ipatasertib, atezolizumab

Location: United Kingdom

PIK3CA H1047R (continued)

NCT05300048
A Phase 1b Study of Serabelisib in Combination With an Insulin Suppressing Diet (Study ISD) in Subjects With Advanced Solid Tumors With PIK3CA Mutations With or Without PTEN Loss

Cancer type: Unspecified Solid Tumor

Variant class: PIK3CA activating mutation

Other inclusion criteria: PTEN underexpression

Other identifier: SER-ISD1-001

Population segments: BRCA, Fourth line or greater, Second line, Stage III, Stage IV, Third line

Phase: I

Therapy: serabelisib

Location: United States

US State: CA

Contact: Katelyn Patterson [415-234-0538; katelyn@faetherapeutics.com]

NCT04344795
Phase 1a/1b Open Label Dose-escalation and Expansion Study of TPST-1495 as a Single Agent and in Combination With Pembrolizumab in Subjects With Solid Tumors

Cancer type: Unspecified Solid Tumor

Variant class: PIK3CA activating mutation

Other identifier: TPST-1495-001

Population segments: Adenocarcinoma, HER2 negative, Second line, Squamous Cell, Stage III, Stage IV, Triple receptor negative

Phase: I

Therapies: TPST-1495, pembrolizumab

Location: United States

US States: MD, MI, NC, OK, PA, TN, TX

Contact: Tempest Clinical Trial Support [415-798-8589 ext 122; 1495-Inquiries@tempesttx.com]

NCT03239015
Efficacy and Safety of Precision Therapy in Refractory Tumor (Long March Pathway)

Cancer type: Unspecified Solid Tumor

Variant class: PIK3CA mutation

Other identifier: HETIAN64

Population segments: (N/A), Second line

Phase: II

Therapy: everolimus

Location: China

PIK3CA H1047R (continued)

NCT04589845
Tumor-Agnostic Precision Immunooncology and Somatic Targeting Rational for You (TAPISTRY) Phase II Platform Trial

Cancer type: Unspecified Solid Tumor

Variant class: PIK3CA mutation

Other identifiers: 2021-00425, BO41932, EudraCT Number: 2020-001847-16, SNCTP000004623, TAPISTRY

Population segments: ALK, First line, HER2 positive, Second line, Stage III, Stage IV

Phase: II

Therapy: inavolisib

Locations: Australia, Belgium, Brazil, Canada, China, Denmark, France, Germany, Hong Kong, Israel, Italy, Japan, New Zealand, Poland, Portugal, Puerto Rico, Republic of Korea, Singapore, Spain, Swaziland, Switzerland, Taiwan, United Kingdom, United States

US States: AL, AZ, CA, DE, FL, GA, ID, IL, MD, ME, MI, MN, MO, MT, NJ, NM, NV, NY, OH, OR, PA, SC, TN, TX, VA, WA, WI

Contact: Reference Study ID Number: BO41932 [888-662-6728; Global-Roche-Genentech-Trials@gene.com]

No NCT ID - see other identifier(s)
A Clinical Trial To Evaluate The Safety And Preliminary Efficacy Of WXFL10030390 Tablets On PIK3CA Advanced Solid Tumors

Cancer type: Unspecified Solid Tumor

Variant class: PIK3CA mutation

Other identifiers: CTR20210917, JYA0102

Population segments: Line of therapy N/A, Stage III, Stage IV

Phase: I/II

Therapy: WXFL-10030390

Location: China

NCT03842228
A Phase Ib Biomarker-Driven Combination Trial of Copanlisib, Olaparib, and Durvalumab (MEDI4736) in Patients With Advanced Solid Tumors

Cancer type: Unspecified Solid Tumor

Variant class: PIK3CA mutation

Other identifiers: 10217, 19-628, NCI-2019-00601, NCI10217

Population segments: Line of therapy N/A, Stage III, Stage IV

Phase: I

Therapies: copanlisib, olaparib, durvalumab

Location: United States

US States: MA, TX

Contact: Multiple contacts: See www.clinicaltrials.gov for complete list of contacts.

PIK3CA H1047R (continued)

No NCT ID - see other identifier(s)
A Phase Ib, open-label, dose-escalation and dose-expansion study evaluating the safety, tolerability, pharmacokinetics, and preliminary antitumor activity of inavolisib in combination with paclitaxel and with or without targeted therapies in patients with locally advanced or metastatic solid tumors

Cancer type: Unspecified Solid Tumor

Variant class: PIK3CA mutation

Other identifiers: CO42800, EudraCT number: 2020-005057-24, ISRCTN45319897

Population segments: Estrogen receptor positive, First line, HER2 positive, Progesterone receptor positive, Second line, Stage I, Stage II, Stage III, Stage IV

Phase: I

Therapies: inavolisib, chemotherapy, trastuzumab, pertuzumab

Locations: Canada, Denmark, France, Republic of Korea, Spain, United States

US State:

NCT03065062
Phase I Study of the CDK4/6 Inhibitor Palbociclib (PD-0332991) in Combination With the PI3K/mTOR Inhibitor Gedatolisib (PF-05212384) for Patients With Advanced Squamous Cell Lung, Pancreatic, Head & Neck and Other Solid Tumors

Cancer type: Unspecified Solid Tumor

Variant class: PIK3CA mutation

Other identifiers: 16-499, NCI-2017-00434

Population segments: Second line, Squamous Cell, Stage III, Stage IV

Phase: I

Therapies: palbociclib, gedatolisib

Location: United States

US State: MA

Contact: Dr. Geoffrey Shapiro [617-632-4942; Geoffrey_Shapiro@dfci.harvard.edu]

NCT04192981
A Phase I Study With Expansion Cohort of Concurrent GDC-0084 With Radiation Therapy for Patients With Solid Tumor Brain Metastases or Leptomeningeal Metastases Harboring PI3K Pathway Mutations

Cancer type: Unspecified Solid Tumor

Variant class: PIK3CA mutation

Other identifiers: 19-359, NCI-2019-08530

Population segments: (N/A), CNS mets, Line of therapy N/A

Phase: I

Therapies: paxalisib, radiation therapy

Location: United States

US States: NJ, NY

Contact: Dr. T. Jonathan Yang [212-639-8157; yangt@mskcc.org]

PIK3CA H1047R (continued)

NCT03297606
Canadian Profiling and Targeted Agent Utilization Trial (CAPTUR): A Phase II Basket Trial

Cancer type: Unspecified Solid Tumor

Variant class: PIK3CA aberration

Other identifiers: CA209-9DL, CAPTUR, ESR-17-12831, ML39800, PM1, WI233446

Population segments: Aggressive, Diffuse large B-cell lymphoma (DLBCL), Extranodal marginal zone B-cell lymphoma (MALT), First line, Follicular lymphoma (FL), Indolent, Lymphoblastic lymphoma (LBL), Mantle cell lymphoma (MCL), Other subtype, Second line, Stage III, Stage IV, Waldenstrom's macroglobulinemia (WM)

Phase: II

Therapy: temsirolimus

Location: Canada

NCT03213678
NCI-COG Pediatric MATCH (Molecular Analysis for Therapy Choice)- Phase II Subprotocol of LY3023414 in Patients With Solid Tumors

Cancer type: Unspecified Solid Tumor

Variant class: PI3K/AKT/MTOR mutation

Other identifiers: 17-742, APEC 1621 D, APEC 1621-D, APEC1621 D, APEC1621D, NCI-2017-01249, NCI-COG Pediatric MATCH, OCR16978, Pediatric MATCH

Population segments: Aggressive, Indolent, Pediatric or Adolescent, Second line, Stage III, Stage IV

Phase: II

Therapy: samotolisib

Locations: Puerto Rico, United States

US States: AK, AL, AR, AZ, CA, CO, CT, DC, DE, FL, GA, IA, ID, IL, IN, KY, LA, MA, MD, ME, MI, MN, MO, MS, NC, ND, NE, NJ, NY, OH, OK, OR, PA, SC, SD, TN, TX, UT, VA, VT, WA, WI

Contact: Multiple contacts: See www.clinicaltrials.gov for complete list of contacts.

NCT04958226
An Open-label, Fixed-sequence Study to Assess the Effect of Repeated Doses of Capivasertib on the Pharmacokinetics of Oral Midazolam (a CYP450 3A Probe) in Patients With Advanced Solid Tumours Harbouring Alterations in the PI3K/AKT/PTEN Pathway

Cancer type: Unspecified Solid Tumor

Variant class: PI3K/AKT/MTOR pathway

Other identifiers: D3614C00003, NCI-2021-07861

Population segments: Second line, Stage III, Stage IV

Phase: I

Therapies: capivasertib, midazolam

Location: United States

US States: CO, NC, OH, PA, TX

Contact: AstraZeneca Clinical Study Information Center [877-240-9479; information.center@astrazeneca.com]

BRCA1 K654Sfs*47

NCT04053322
An International Multicenter Phase II Trial of Durvalumab (MEDI4736) Plus OLAparib Plus Fulvestrant in Metastatic or Locally Advanced ER-positive, HER2-negative Breast Cancer Patients Selected Using Criteria That Predict Sensitivity to Olaparib

Cancer type: Breast Cancer

Variant class: BRCA1 mutation

Other inclusion criteria: ERBB2 negative, ER positive

Other identifiers: CADUSEIME08, DOLAF, EudraCT Number: 2018-003832-57, UC-0140/1812

Population segments: BRCA, Estrogen receptor positive, FGFR, HER2 negative, Second line, Stage III, Stage IV

Phase: II

Therapies: durvalumab, olaparib, hormone therapy

Location: France

NCT03344965
A Phase II Study of Olaparib Monotherapy in Metastatic Breast Cancer Patients With Germline or Somatic Mutations in DNA Repair Genes (Olaparib Expanded)

Cancer type: Breast Cancer

Variant class: BRCA1 mutation

Other identifiers: 17-428, 18-414, NCI-2018-00778, TBCRC 048, TBCRC048

Population segments: BRCA, Estrogen receptor positive, HER2 negative, HER2 positive, Progesterone receptor positive, Second line, Stage IV

Exclusion criteria variant classes: BRCA1 germline mutation, BRCA2 germline mutation

Phase: II

Therapy: olaparib

Location: United States

US States: AL, IL, MA, MD, NC, NJ, NY, PA, WA

Contact: Dr. Nadine Tung [617-667-1962; ntung@bidmc.harvard.edu]

BRCA1 K654Sfs*47 (continued)

NCT03742895
A Phase II Study of Olaparib Monotherapy in Participants With Previously Treated, Homologous Recombination Repair Mutation (HRRm) or Homologous Recombination Deficiency (HRD) Positive Advanced Cancer

Cancer type: Breast Cancer

Variant class: BRCA1 mutation

Other inclusion criteria: BRCA1 germline mutation negative, BRCA2 germline mutation negative

Other identifiers: (MK-7339-002 / LYNK-002), 19-139, 194694, 2018-01891, 7339-002, 7339-002-00, EudraCT Number: 2018-003007-19, IRAS ID: 255158, JapicCTI-194694, LYNK-002, LYNK002, MK-7339-002, MK7339-002, MK7339-002-00, NCI-2018-03519, PER-046-18, SNCTP000003157

Population segments: BRCA, Fourth line or greater, Second line, Stage III, Stage IV, Third line

Exclusion criteria variant class: BRCA germline mutation

Phase: II

Therapy: olaparib

Locations: Argentina, Australia, Canada, Colombia, Denmark, France, Guatemala, Ireland, Israel, Italy, Mexico, Peru, Republic of Korea, Romania, Spain, Switzerland, Turkey, United Kingdom, United States

US States: AZ, CA, CO, KY, MD, NE, NJ, NY, SD, UT, WA

Contact: Toll Free Number [888-577-8839; Trialsites@merck.com]

NCT05340413
Predicting Olaparib Sensitivity in Patients With Unresectable Locally Advanced/ Metastatic HER2-negative Breast Cancer With BRCA1, BRCA2, PALB2, RAD51C or RAD51D Mutations or RAD51-foci Low Test: RADIOLA TRIAL

Cancer type: Breast Cancer

Variant class: BRCA1 mutation

Other inclusion criteria: ERBB2 negative, Hormone receptor positive

Other identifiers: EudraCT Number: 2021-001398-22, RADIOLA, SOLTI-1910

Population segments: BRCA, Estrogen receptor positive, HER2 negative, Progesterone receptor positive, Second line, Stage III, Stage IV, Triple receptor negative

Exclusion criteria variant classes: ERBB2 amplification, ERBB2 overexpression

Phase: II

Therapy: olaparib

Location: Spain

NCT03990896
Evaluation of Talazoparib, a PARP Inhibitor, in Patients With Somatic BRCA Mutant Metastatic Breast Cancer: Genotyping Based Clinical Trial.

Cancer type: Breast Cancer

Variant class: BRCA1 mutation

Other inclusion criteria: ERBB2 negative, Hormone receptor positive

Other identifiers: 19-188, 2021-0033, 207513, NCI-2019-07732

Population segments: BRCA, Estrogen receptor positive, HER2 negative, Progesterone receptor positive, Second line, Stage IV, Triple receptor negative

Exclusion criteria variant classes: BRCA1 germline mutation, BRCA2 germline mutation

Phase: II

Therapy: talazoparib

Location: United States

US States: CA, MA, TX

Contact: Dr. Neelima Vidula [617-724-4000; nvidula@mgh.harvard.edu]

BRCA1 K654Sfs*47 (continued)

NCT04892693
Talazoparib in Advanced Breast Cancer Patients With Homologous Recombinant Deficiency: A Phase II Clinical and Exploratory Biomarker Study of Talazoparib

Cancer type: Breast Cancer

Variant class: BRCA1 mutation

Other identifier: H-2009-079-1157

Population segments: BRCA, Line of therapy N/A, Stage III, Stage IV

Phase: II

Therapy: talazoparib

Location: Republic of Korea

NCT03685331
Harnessing Olaparib, Palbociclib and Endocrine Therapy: A Phase I/II Trial of Olaparib, Palbociclib and Fulvestrant in Patients With BRCA Mutation-associated, Hormone Receptor-positive, Human Epidermal Growth Factor Receptor 2 (HER2)-Negative Metastatic Breast Cancer (HOPE).

Cancer type: Breast Cancer

Variant class: BRCA1 mutation

Other inclusion criteria: ERBB2 negative, Hormone receptor positive

Other identifiers: (HOPE), NCI-2019-04210, UPCC 21118

Population segments: BRCA, Estrogen receptor positive, First line, HER2 negative, Progesterone receptor positive, Second line, Stage III, Stage IV, Third line

Phase: I/II

Therapies: olaparib, palbociclib, hormone therapy

Location: United States

US State: PA

Contact: Alexandra Torres [855-216-0098; PennCancerTrials@emergingmed.com]

NCT03964532
TALAVE: A Pilot Trial of Induction Talazoparib Followed by Combination of Talazoparib and Avelumab in Advanced Breast Cancer

Cancer type: Breast Cancer

Variant class: BRCA1 mutation

Other inclusion criteria: ERBB2 negative

Other identifiers: NCI-2019-06240, STUDY00000023, TALAVE

Population segments: Line of therapy N/A, Stage III, Stage IV

Phase: I/II

Therapies: talazoparib, avelumab

Location: United States

US States: DC, UT

Contact: Nicole Swanson [202-687-9194; ns1209@georgetown.edu]

BRCA1 K654Sfs*47 (continued)

NCT04586335
Open Label, Phase Ib Study to Evaluate the Safety, Tolerability, Pharmacokinetics and Clinical Activity of CYH33, an Oral a-specific PI3K Inhibitor in Combination With Olaparib, an Oral PARP Inhibitor in Patients With Advanced Solid Tumors.

Cancer type: Breast Cancer

Variant class: BRCA1 mutation

Other identifiers: CTR20202339, CYH33-G102

Population segments: BRCA, Second line, Stage III, Stage IV

Phase: I

Therapies: HH-CYH33, olaparib

Locations: Australia, United States

US State: TX

Contact: Dr. Jason Sudia [908-380-1329; jason.sudia@haihepharma.com]

NCT04673448
Phase IB Trial of Niraparib and TSR-042 in Patients With BRCA-Mutated Breast, Pancreas or Ovary Cancer

Cancer type: Breast Cancer

Variant class: BRCA1 mutation

Other identifiers: 10020, NCI-2020-11636, RG1005140

Population segments: BRCA, Estrogen receptor positive, HER2 positive, Progesterone receptor positive, Second line, Stage III, Stage IV

Phase: I

Therapies: niraparib, dostarlimab

Location: United States

US State: WA

Contact: Elizabeth M. Swisher [206-543-3669; swishere@uw.edu]

NCT04915755
A Randomized Phase III Double-Blinded Study Comparing the Efficacy and Safety of Niraparib to Placebo in Participants With Either HER2-Negative BRCA-Mutated or Triple-Negative Breast Cancer With Molecular Disease Based on Presence of Circulating Tumor DNA After Definitive Therapy (ZEST)

Cancer type: Breast Cancer

Variant class: BRCA mutation

Other inclusion criteria: ERBB2 negative

Other identifiers: 213831, EudraCT Number: 2020-003973-23, GSK 213831 ZEST, IRAS ID: 290151, jRCT2031210330, SNCTP000004543, ZEST

Population segments: BRCA, Estrogen receptor positive, HER2 negative, Progesterone receptor positive, Second line, Stage I, Stage II, Stage III, Triple receptor negative

Phase: III

Therapy: niraparib

Locations: Argentina, Australia, Austria, Belgium, Brazil, Canada, Chile, Colombia, Finland, France, Germany, Ireland, Italy, Japan, Mexico, Netherlands, Norway, Poland, Russian Federation, South Africa, Spain, Switzerland, United Kingdom, United States

US States: CA, CO, IL, MI, ND, NM, NY, PA, SD, TX, VA, WA

Contact: US GSK Clinical Trials Call Center [877-379-3718; GSKClinicalSupportHD@gsk.com]

BRCA1 K654Sfs*47 (continued)

NCT05085626
An Open, Single-center, Cohort Clinical Study of Fluzoparib in Combination With Chidamide or Camrelizumab for HRD Positive and HER2-negative Advanced Breast Cancer

Cancer type: Breast Cancer

Variant class: BRCA mutation or HR Deficient

Other inclusion criteria: ERBB2 negative, Hormone receptor status

Population segments: BRCA, Estrogen receptor positive, HER2 negative, Progesterone receptor positive, Second line, Stage IV, Third line

Phase: II

Therapies: fluzoparib, tucidinostat, camrelizumab

Location: China

NCT04644289
Window-of-opportunity Proof-of-concept, Non-randomized, Open-label Phase II Trial of Olaparib Given Alone (Cohort A) or in Combination With Durvalumab (Cohort B) Prior to Primary Debulking Surgery in Histologically Proven High-grade Epithelial Ovarian Cancer (EOC)

Cancer type: Breast Cancer

Variant class: BRCA mutation

Other identifiers: AGO-OVAR 27, AGO-OVAR27, EudraCT Number: 2020-005101-12, WoO

Population segments: BRCA, First line, Maintenance/Consolidation, Stage II, Stage III, Stage IV

Phase: II

Therapies: olaparib, durvalumab

Location: Germany

NCT04711824
Phase I/II Study of Stereotactic Radiosurgery with Concurrent Administration of DNA Damage Response (DDR) Inhibitor (Olaparib) Followed by Adjuvant Combination of Durvalumab (MEDI4736) and Physician's Choice Systemic Therapy in Subjects with Breast Cancer Brain Metastases

Cancer type: Breast Cancer

Variant class: BRCA mutation

Other inclusion criteria: ERBB2 negative

Other identifier: HCRN BRE18-360

Population segments: Adjuvant, BRCA, CNS mets, HER2 negative, Stage IV, Triple receptor negative

Phase: I/II

Therapies: olaparib, radiation therapy, durvalumab, chemotherapy

Location: United States

US States: AL, NC

Contact: Dr. Colette Shen [984-974-8429; colette_shen@med.unc.edu]

BRCA1 K654Sfs*47 (continued)

NCT02264678
A Modular Phase I, Open-Label, Multicentre Study to Assess the Safety, Tolerability, Pharmacokinetics and Preliminary Anti-tumour Activity of Ceralasertib in Combination With Cytotoxic Chemotherapy and/or DNA Damage Repair/Novel Anti-cancer Agents in Patients With Advanced Solid Malignancies.

Cancer type: Breast Cancer

Variant class: BRCA mutation

Other inclusion criteria: ERBB2 negative

Other identifiers: 0C-14-9, 16-031, 18-342, D5330C00004, EudraCT Number: 2014-002233-66, IRAS ID 160200, NCI-2015-00687, Study 4

Population segments: Adenocarcinoma, BRCA, HER2 negative, Pulmonary, Second line, Stage III, Stage IV, Third line, Triple receptor negative

Exclusion criteria variant class: ERBB2 positive

Phase: I

Therapies: ceralasertib, olaparib

Locations: France, Republic of Korea, United Kingdom, United States

US States: CA, MA, NY

Contact: AstraZeneca Clinical Study Information Center [877-240-9479; information.center@astrazeneca.com]

NCT04169841
Precision Medicine Phase II Study Evaluating the Efficacy of a Double Immunotherapy by Durvalumab and Tremelimumab Combined With Olaparib in Patients With Solid Cancers and Carriers of Homologous Recombination Repair Genes Mutation in Response or Stable After Olaparib Treatment

Cancer type: Breast Cancer

Variant class: HRR mutation

Other identifiers: EudraCT Number: 2018–002971-17, GUIDE2REPAIR

Population segments: Fourth line or greater, Hormone refractory, Maintenance/ Consolidation, Second line, Stage III, Stage IV, Third line

Phase: II

Therapies: durvalumab, tremelimumab, olaparib

Location: France

NCT05002868
A Multi-center, Open-label, Phase I/Ib Study to Assess the Safety, Pharmacokinetics and Anti-tumor Activity of RP12146, a Poly (ADP-ribose) Polymerase (PARP) Inhibitor, in Patients With Locally Advanced or Metastatic Solid Tumors

Cancer type: Breast Cancer

Variant class: HRR mutation

Other identifier: RP12146-2101

Population segments: Extensive, Pulmonary, Second line, Stage III, Stage IV

Exclusion criteria variant class: ERBB2 positive

Phase: I

Therapy: RP12146

Locations: Czech Republic, Poland

BRCA1 K654Sfs*47 (continued)

NCT04095273
A Multicenter, Non-randomized, Open-label Phase 1b Study to Determine the Maximum Tolerated and Recommended Phase 2 Dose of the ATR Inhibitor Elimusertib in Combination With Pembrolizumab and to Characterize Its Safety, Tolerability, Pharmacokinetics and Preliminary Anti-tumor Activity in Participants With Advanced Solid Tumors

Cancer type: Breast Cancer

Variant class: DNA repair mutation

Other inclusion criteria: ATM mutation negative, ERBB2 negative, Hormone receptor positive

Other identifiers: 19741, EudraCT Number: 2018-003420-36, Keynote 919, NCI-2019-06734

Population segments: Fourth line or greater, HER2 negative, Hormone refractory, Second line, Stage III, Stage IV

Phase: I

Therapies: elimusertib, pembrolizumab

Locations: Germany, Spain, Switzerland, United Kingdom, United States

US States: CA, CT, MA, MD, NC, NY, OH, TX

Contact: Bayer Clinical Trials Contact [clinical-trials-contact@bayer.com]

NCT02810743
Substantially Improving the Cure Rate of High-risk BRCA1-like Breast Cancer Patients With Personalized Therapy (SUBITO) - an International Randomized Phase III Trial

Cancer type: Breast Cancer

Variant class: HR Deficient

Other inclusion criteria: ERBB2 negative

Other identifiers: EudraCT Number: 2016-002493-13, M16BRC, NL58091.031.16, SUBITO

Population segments: Adjuvant, HER2 negative, Neoadjuvant, Stage III

Phase: III

Therapies: chemotherapy, olaparib

Locations: France, Netherlands

NCT04240106
Multicenter,Open-label,Phase II Clinical Trial to Evaluate the Efficacy and Safety of Niraparib + Aromatase Inhibitors for(HR)+/(HER2)-, MBC With Either Germline BRCA-mutated or Germinal BRCA-wildtype and Homologous Recombination Deficiency

Cancer type: Breast Cancer

Variant class: HR Deficient

Other inclusion criteria: BRCA1 germline wild type, ERBB2 negative, Hormone receptor positive or BRCA2 germline wild type, ERBB2 negative, Hormone receptor positive

Other identifiers: EudraCT Number: 2017-004323-72, LUZERN, MedOPP190

Population segments: BRCA, Estrogen receptor positive, HER2 negative, Progesterone receptor positive, Second line, Stage I, Stage II, Stage III, Stage IV, Third line

Exclusion criteria variant classes: ERBB2 amplification, ERBB2 overexpression

Phase: II

Therapies: niraparib, hormone therapy

Location: Spain

BRCA1 K654Sfs*47 (continued)

No NCT ID - see other identifier(s)
Phase II Clinical Trial of the PARP Inhibitor, Olaparib, in HR-Deficient Metastatic Breast and Relapsed Ovarian Cancer in Patients Without Germline Mutations in BRCA1 and BRCA2: The EMBRACE study

Cancer type: Breast Cancer

Variant class: HR Deficient

Other inclusion criteria: BRCA1 germline mutation negative, BRCA2 germline mutation negative

Other identifiers: ACTRN12617000855325, CTC0160, EMBRACE study

Population segments: HER2 negative, Second line, Stage IV, Triple receptor negative

Exclusion criteria variant classes: BRCA1 germline mutation, BRCA2 germline mutation

Phase: II

Therapy: olaparib

Location: Australia

NCT05261269
A Dose-escalation Study of the Safety and Pharmacology of DAN-222 in Subjects With Metastatic Breast Cancer

Cancer type: Breast Cancer

Variant class: HR Deficient

Other inclusion criteria: ERBB2 negative

Other identifier: DAN-22220205

Population segments: BRCA, Estrogen receptor positive, HER2 negative, Progesterone receptor positive, Stage IV, Third line

Phase: I

Therapies: DAN-222, niraparib

Location: United States

US State: TN

Contact: Dr. Timothy Hagerty [clinical@dantari.com]

NCT04992013
Genomically Guided Phase II Study to Evaluate the Clinical Benefit of Niraparib in Tumors Metastatic to the CNS

Cancer type: Unspecified Solid Tumor

Variant class: BRCA1 mutation or HR Deficient

Other identifier: 21-154

Population segments: BRCA, CNS mets, HER2 negative, Second line, Stage IV, Triple receptor negative

Phase: II

Therapy: niraparib

Location: United States

US State: MA

Contact: Dr. Priscilla Brastianos [617-643-1938; pbrastianos@mgh.harvard.edu]

BRCA1 K654Sfs*47 (continued)

NCT02029001
A Two-period, Multicenter, Randomized, Open-label, Phase II Study Evaluating the Clinical Benefit of a Maintenance Treatment Targeting Tumor Molecular Alterations in Patients with Progressive Locally-advanced or Metastatic Solid Tumors.

Cancer type: Unspecified Solid Tumor

Variant class: BRCA1 mutation

Other identifiers: ET12-081, EudraCT Number: 2012-004510-34, MOST, ProfiLER

Population segments: Maintenance/Consolidation, Second line, Stage III, Stage IV, Third line

Phase: II

Therapy: olaparib

Location: France

NCT03967938
Efficacy of Olaparib in Advanced Cancers Occurring in Patients With Germline Mutations or Somatic Tumor Mutations in Homologous Recombination Genes

Cancer type: Unspecified Solid Tumor

Variant class: BRCA1 mutation

Other identifiers: 1-2018 BSMO, 1-2018BSMO, EudraCT Number: 2018-002966-37, Precision 2 - Olaparib

Population segments: Line of therapy N/A, Stage III, Stage IV

Exclusion criteria variant classes: BRCA1 germline mutation, BRCA2 germline mutation

Phase: II

Therapy: olaparib

Location: Belgium

NCT02693535
Targeted Agent and Profiling Utilization Registry (TAPUR) Study

Cancer type: Unspecified Solid Tumor

Variant class: BRCA1 mutation

Other identifiers: 20170529, NCI-2017-00510, Pro00014171, TAPUR

Population segments: Aggressive, BRAF, Diffuse large B-cell lymphoma (DLBCL), Extranodal marginal zone B-cell lymphoma (MALT), FGFR, First line, Follicular lymphoma (FL), Fourth line or greater, Indolent, Lymphoblastic lymphoma (LBL), Mantle cell lymphoma (MCL), Other subtype, Second line, Small lymphocytic lymphoma (SLL), Stage III, Stage IV, Third line, Waldenstrom's macroglobulinemia (WM)

Phase: II

Therapies: olaparib, talazoparib, atezolizumab + talazoparib

Location: United States

US States: AL, AZ, CA, CT, FL, GA, HI, IL, IN, ME, MI, NC, ND, NE, NH, NM, NY, OH, OR, PA, SC, SD, TN, TX, UT, VA, WA, WI

Contact: Pam Mangat [pam.mangat@asco.org]

BRCA1 K654Sfs*47 (continued)

NCT04985721
An Open Label, Signal Seeking, Translational, Phase II Trial of Pamiparib in Combination With Tislelizumab in Patients With Advanced Tumours With Homologous Recombination Repair Defects

Cancer type: Unspecified Solid Tumor

Variant class: BRCA1 mutation or HR Deficient

Other identifiers: 20/044, IMPARP-HRD

Population segments: (N/A), BRCA, Line of therapy N/A

Phase: II

Therapies: pamiparib, tislelizumab

Location: Australia

NCT04550494
A Pharmacodynamics-Driven Trial of Talazoparib, an Oral PARP Inhibitor, in Patients With Advanced Solid Tumors and Aberrations in Genes Involved in DNA Damage Response

Cancer type: Unspecified Solid Tumor

Variant class: BRCA1 mutation

Other identifiers: 000246, 000264-C, 10000264, 10371, NCI-2020-06906

Population segments: BRCA, Fourth line or greater, HER2 positive, Hormone refractory, Second line, Stage II, Stage III, Stage IV, Third line

Phase: II

Therapy: talazoparib

Location: United States

US States: MD, OK

Contact: Multiple contacts: See www.clinicaltrials.gov for complete list of contacts.

NCT05071209
A Phase I/II Study of BAY 1895344 (Elimusertib, NSC#810486) in Pediatric Patients With Relapsed or Refractory Solid Tumors

Cancer type: Unspecified Solid Tumor

Variant class: BRCA1 mutation

Other identifiers: 21-494, NCI-2021-10751, PEPN2112

Population segments: (N/A), Aggressive, BRCA, Classical, Indolent, Nodular lymphocyte-predominant, Pediatric or Adolescent, Second line

Phase: I/II

Therapy: elimusertib

Location: United States

US States: AL, CA, CO, DC, IL, IN, MA, MI, MN, MO, NC, NY, OH, PA, TN, TX

Contact: Multiple contacts: See www.clinicaltrials.gov for complete list of contacts.

BRCA1 K654Sfs*47 (continued)

NCT02595931
Phase I Clinical Trial of M6620 (VX-970, Berzosertib) in Combination With the Topoisomerase I Inhibitor Irinotecan in Patients With Advanced Solid Tumors.

Cancer type: Unspecified Solid Tumor

Variant class: BRCA1 mutation

Other identifiers: 0C-16-6, 19-716, 2016-157, 201608110, 9938, HCC 15-164, LAO-PA015, NCI-2015-01915, PHI-87, UPCI 15-164, VICCPHI16154ET-CT

Population segments: Second line, Stage III, Stage IV

Phase: I

Therapies: berzosertib, chemotherapy

Location: United States

US States: CA, CT, MA, MO, PA, TN

Contact: Multiple contacts: See www.clinicaltrials.gov for complete list of contacts.

NCT05038839
A Phase I Study of Cabozantinib and Pamiparib to Evaluate Triple Inhibition of PARP, VEGFR and c-MET in Advanced Homologous Recombination Deficient Malignancies

Cancer type: Unspecified Solid Tumor

Variant class: BRCA1 mutation

Other identifiers: 2020-0308, NCI-2021-03248

Population segments: BRCA, Second line, Stage III, Stage IV

Phase: I

Therapies: cabozantinib, pamiparib

Location: United States

US State: TX

Contact: Siqing Fu [713-792-4318; siqingfu@mdanderson.org]

NCT03842228
A Phase Ib Biomarker-Driven Combination Trial of Copanlisib, Olaparib, and Durvalumab (MEDI4736) in Patients With Advanced Solid Tumors

Cancer type: Unspecified Solid Tumor

Variant class: BRCA1 mutation

Other identifiers: 10217, 19-628, NCI-2019-00601, NCI10217

Population segments: Line of therapy N/A, Stage III, Stage IV

Phase: I

Therapies: copanlisib, olaparib, durvalumab

Location: United States

US States: MA, TX

Contact: Multiple contacts: See www.clinicaltrials.gov for complete list of contacts.

BRCA1 K654Sfs*47 (continued)

NCT03415659
A Phase I, Open-label, Single-center, Single/Multiple-dose, Dose-escalation/ Dose-expansion Clinical Study on Tolerance and Pharmacokinetics of HWH340 Tablet in Patients With Advanced Solid Tumors

Cancer type: Unspecified Solid Tumor

Variant class: BRCA1 mutation

Other identifiers: CTR20171649, HWH340-RFPA 20170821, RFPA 20170821

Population segments: BRCA, Fourth line or greater, HER2 negative, Second line, Stage III, Stage IV, Third line

Phase: I

Therapy: HWH-340

Location: China

NCT03297606
Canadian Profiling and Targeted Agent Utilization Trial (CAPTUR): A Phase II Basket Trial

Cancer type: Unspecified Solid Tumor

Variant class: BRCA1 aberration or HR Deficient

Other identifiers: CA209-9DL, CAPTUR, ESR-17-12831, ML39800, PM1, WI233446

Population segments: Aggressive, Diffuse large B-cell lymphoma (DLBCL), Extranodal marginal zone B-cell lymphoma (MALT), First line, Follicular lymphoma (FL), Indolent, Lymphoblastic lymphoma (LBL), Mantle cell lymphoma (MCL), Other subtype, Second line, Stage III, Stage IV, Waldenstrom's macroglobulinemia (WM)

Phase: II

Therapy: olaparib

Location: Canada

NCT04174716
An Open-label, Multi-center, Phase Ib/ IIa Basket Trial of IDX-1197 in Patients With Homologous Recombination Repair Mutated Solid Tumors

Cancer type: Unspecified Solid Tumor

Variant class: HRR mutation

Other identifiers: ID-VDP-102, VASTUS

Population segments: (N/A), BRCA, First line, Pulmonary, Second line

Phase: I/II

Therapy: venadaparib

Location: Republic of Korea

NCT03767075
Basket of Baskets: A Modular, Open-label, Phase II, Multicentre Study To Evaluate Targeted Agents in Molecularly Selected Populations With Advanced Solid Tumours

Cancer type: Unspecified Solid Tumor

Variant class: DNA repair mutation

Other identifiers: (Basket of Baskets) (BoB), EudraCT number: 2017-005108-89, MO39164, NL65937.031.18, VHIO17002

Population segments: Second line, Stage III, Stage IV

Phase: II

Therapy: atezolizumab

Locations: France, Germany, Netherlands, Spain, Sweden, United Kingdom

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BRCA1 K654Sfs*47 (continued)

NCT04423185
Platform Study of Genotyping Guided Precision Medicine for Rare Tumors in China

Cancer type: Unspecified Solid Tumor

Variant class: HR Deficient

Other identifiers: ChiCTR2000039310, NCC2380, PLATFORM

Population segments: ALK, BRAF, BRCA, EGFR, Second line, Stage III, Stage IV

Phase: II

Therapy: niraparib

Location: China

NCT03742895
A Phase II Study of Olaparib Monotherapy in Participants With Previously Treated, Homologous Recombination Repair Mutation (HRRm) or Homologous Recombination Deficiency (HRD) Positive Advanced Cancer

Cancer type: Unspecified Solid Tumor

Variant class: HR Deficient

Other identifiers: (MK-7339-002 / LYNK-002), 19-139, 194694, 2018-01891, 7339-002, 7339-002-00, EudraCT Number: 2018-003007-19, IRAS ID: 255158, JapicCTI-194694, LYNK-002, LYNK002, MK-7339-002, MK7339-002, MK7339-002-00, NCI-2018-03519, PER-046-18, SNCTP000003157

Population segments: BRCA, Fourth line or greater, Second line, Stage III, Stage IV, Third line

Exclusion criteria variant class: BRCA germline mutation

Phase: II

Therapy: olaparib

Locations: Argentina, Australia, Canada, Colombia, Denmark, France, Guatemala, Ireland, Israel, Italy, Mexico, Peru, Republic of Korea, Romania, Spain, Switzerland, Turkey, United Kingdom, United States

US States: AZ, CA, CO, KY, MD, NE, NJ, NY, SD, UT, WA

Contact: Toll Free Number [888-577-8839; Trialsites@merck.com]

NCT04267939
An Open-label Phase Ib Study to Determine the Maximum Tolerated and/or Recommended Phase II Dose of the ATR Inhibitor BAY 1895344 in Combination With PARP Inhibitor Niraparib, in Patients With Recurrent Advanced Solid Tumors and Ovarian Cancer

Cancer type: Unspecified Solid Tumor

Variant class: DNA repair pathway

Other identifiers: 18595, 19-810, 2019-0471, 20-222, EudraCT Number: 2018-003930-34, NCI-2020-01405

Population segments: Maintenance/Consolidation, Second line, Stage III, Stage IV

Phase: I

Therapies: elimusertib, niraparib

Location: United States

US States: MA, NY, TX

Contact: Bayer Clinical Trials Contact [888-842-2937; clinical-trials-contact@bayer.com]

BRCA1 K654Sfs*47 (continued)

NCT04693468
Modular Phase IB Hypothesis-Testing, Biomarker-Driven, Talazoparib Combination Trial (TalaCom)

Cancer type: Unspecified Solid Tumor

Variant class: DNA repair pathway

Other identifiers: 2020-0436, NCI-2020-06041, TalaCom

Population segments: Hormone refractory, Second line, Stage III, Stage IV

Phase: I

Therapies: talazoparib, palbociclib, axitinib, crizotinib

Location: United States

US State: TX

Contact: Timothy A. Yap [713-563-1784; tyap@mdanderson.org]

BRCA2 K862Sfs*17

NCT04053322
An International Multicenter Phase II Trial of Durvalumab (MEDI4736) Plus OLAparib Plus Fulvestrant in Metastatic or Locally Advanced ER-positive, HER2-negative Breast Cancer Patients Selected Using Criteria That Predict Sensitivity to Olaparib

Cancer type: Breast Cancer

Variant class: BRCA2 mutation

Other inclusion criteria: ERBB2 negative, ER positive

Other identifiers: CADUSEIME08, DOLAF, EudraCT Number: 2018-003832-57, UC-0140/1812

Population segments: BRCA, Estrogen receptor positive, FGFR, HER2 negative, Second line, Stage III, Stage IV

Phase: II

Therapies: durvalumab, olaparib, hormone therapy

Location: France

NCT03344965
A Phase II Study of Olaparib Monotherapy in Metastatic Breast Cancer Patients With Germline or Somatic Mutations in DNA Repair Genes (Olaparib Expanded)

Cancer type: Breast Cancer

Variant class: BRCA2 mutation

Other identifiers: 17-428, 18-414, NCI-2018-00778, TBCRC 048, TBCRC048

Population segments: BRCA, Estrogen receptor positive, HER2 negative, HER2 positive, Progesterone receptor positive, Second line, Stage IV

Exclusion criteria variant classes: BRCA1 germline mutation, BRCA2 germline mutation

Phase: II

Therapy: olaparib

Location: United States

US States: AL, IL, MA, MD, NC, NJ, NY, PA, WA

Contact: Dr. Nadine Tung [617-667-1962; ntung@bidmc.harvard.edu]

BRCA2 K862Sfs*17 (continued)

NCT03742895
A Phase II Study of Olaparib Monotherapy in Participants With Previously Treated, Homologous Recombination Repair Mutation (HRRm) or Homologous Recombination Deficiency (HRD) Positive Advanced Cancer

Cancer type: Breast Cancer

Variant class: BRCA2 mutation

Other inclusion criteria: BRCA1 germline mutation negative, BRCA2 germline mutation negative

Other identifiers: (MK-7339-002 / LYNK-002), 19-139, 194694, 2018-01891, 7339-002, 7339-002-00, EudraCT Number: 2018-003007-19, IRAS ID: 255158, JapicCTI-194694, LYNK-002, LYNK002, MK-7339-002, MK7339-002, MK7339-002-00, NCI-2018-03519, PER-046-18, SNCTP000003157

Population segments: BRCA, Fourth line or greater, Second line, Stage III, Stage IV, Third line

Exclusion criteria variant class: BRCA germline mutation

Phase: II

Therapy: olaparib

Locations: Argentina, Australia, Canada, Colombia, Denmark, France, Guatemala, Ireland, Israel, Italy, Mexico, Peru, Republic of Korea, Romania, Spain, Switzerland, Turkey, United Kingdom, United States

US States: AZ, CA, CO, KY, MD, NE, NJ, NY, SD, UT, WA

Contact: Toll Free Number [888-577-8839; Trialsites@merck.com]

NCT05340413
Predicting Olaparib Sensitivity in Patients With Unresectable Locally Advanced/ Metastatic HER2-negative Breast Cancer With BRCA1, BRCA2, PALB2, RAD51C or RAD51D Mutations or RAD51-foci Low Test: RADIOLA TRIAL

Cancer type: Breast Cancer

Variant class: BRCA2 mutation

Other inclusion criteria: ERBB2 negative, Hormone receptor positive

Other identifiers: EudraCT Number: 2021-001398-22, RADIOLA, SOLTI-1910

Population segments: BRCA, Estrogen receptor positive, HER2 negative, Progesterone receptor positive, Second line, Stage III, Stage IV, Triple receptor negative

Exclusion criteria variant classes: ERBB2 amplification, ERBB2 overexpression

Phase: II

Therapy: olaparib

Location: Spain

NCT03990896
Evaluation of Talazoparib, a PARP Inhibitor, in Patients With Somatic BRCA Mutant Metastatic Breast Cancer: Genotyping Based Clinical Trial.

Cancer type: Breast Cancer

Variant class: BRCA2 mutation

Other inclusion criteria: ERBB2 negative, Hormone receptor positive

Other identifiers: 19-188, 2021-0033, 207513, NCI-2019-07732

Population segments: BRCA, Estrogen receptor positive, HER2 negative, Progesterone receptor positive, Second line, Stage IV, Triple receptor negative

Exclusion criteria variant classes: BRCA1 germline mutation, BRCA2 germline mutation

Phase: II

Therapy: talazoparib

Location: United States

US States: CA, MA, TX

Contact: Dr. Neelima Vidula [617-724-4000; nvidula@mgh.harvard.edu]

BRCA2 K862Sfs*17 (continued)

NCT04892693
Talazoparib in Advanced Breast Cancer Patients With Homologous Recombinant Deficiency: A Phase II Clinical and Exploratory Biomarker Study of Talazoparib

Cancer type: Breast Cancer

Variant class: BRCA2 mutation

Other identifier: H-2009-079-1157

Population segments: BRCA, Line of therapy N/A, Stage III, Stage IV

Phase: II

Therapy: talazoparib

Location: Republic of Korea

NCT03685331
Harnessing Olaparib, Palbociclib and Endocrine Therapy: A Phase I/II Trial of Olaparib, Palbociclib and Fulvestrant in Patients With BRCA Mutation-associated, Hormone Receptor-positive, Human Epidermal Growth Factor Receptor 2 (HER2)-Negative Metastatic Breast Cancer (HOPE).

Cancer type: Breast Cancer

Variant class: BRCA2 mutation

Other inclusion criteria: ERBB2 negative, Hormone receptor positive

Other identifiers: (HOPE), NCI-2019-04210, UPCC 21118

Population segments: BRCA, Estrogen receptor positive, First line, HER2 negative, Progesterone receptor positive, Second line, Stage III, Stage IV, Third line

Phase: I/II

Therapies: olaparib, palbociclib, hormone therapy

Location: United States

US State: PA

Contact: Alexandra Torres [855-216-0098; PennCancerTrials@emergingmed.com]

NCT03964532
TALAVE: A Pilot Trial of Induction Talazoparib Followed by Combination of Talazoparib and Avelumab in Advanced Breast Cancer

Cancer type: Breast Cancer

Variant class: BRCA2 mutation

Other inclusion criteria: ERBB2 negative

Other identifiers: NCI-2019-06240, STUDY00000023, TALAVE

Population segments: Line of therapy N/A, Stage III, Stage IV

Phase: I/II

Therapies: talazoparib, avelumab

Location: United States

US States: DC, UT

Contact: Nicole Swanson [202-687-9194; ns1209@georgetown.edu]

BRCA2 K862Sfs*17 (continued)

NCT04586335
Open Label, Phase Ib Study to Evaluate the Safety, Tolerability, Pharmacokinetics and Clinical Activity of CYH33, an Oral a-specific PI3K Inhibitor in Combination With Olaparib, an Oral PARP Inhibitor in Patients With Advanced Solid Tumors.

Cancer type: Breast Cancer

Variant class: BRCA2 mutation

Other identifiers: CTR20202339, CYH33-G102

Population segments: BRCA, Second line, Stage III, Stage IV

Phase: I

Therapies: HH-CYH33, olaparib

Locations: Australia, United States

US State: TX

Contact: Dr. Jason Sudia [908-380-1329; jason.sudia@haihepharma.com]

NCT04673448
Phase IB Trial of Niraparib and TSR-042 in Patients With BRCA-Mutated Breast, Pancreas or Ovary Cancer

Cancer type: Breast Cancer

Variant class: BRCA2 mutation

Other identifiers: 10020, NCI-2020-11636, RG1005140

Population segments: BRCA, Estrogen receptor positive, HER2 positive, Progesterone receptor positive, Second line, Stage III, Stage IV

Phase: I

Therapies: niraparib, dostarlimab

Location: United States

US State: WA

Contact: Elizabeth M. Swisher [206-543-3669; swishere@uw.edu]

NCT04915755
A Randomized Phase III Double-Blinded Study Comparing the Efficacy and Safety of Niraparib to Placebo in Participants With Either HER2-Negative BRCA-Mutated or Triple-Negative Breast Cancer With Molecular Disease Based on Presence of Circulating Tumor DNA After Definitive Therapy (ZEST)

Cancer type: Breast Cancer

Variant class: BRCA mutation

Other inclusion criteria: ERBB2 negative

Other identifiers: 213831, EudraCT Number: 2020-003973-23, GSK 213831 ZEST, IRAS ID: 290151, jRCT2031210330, SNCTP000004543, ZEST

Population segments: BRCA, Estrogen receptor positive, HER2 negative, Progesterone receptor positive, Second line, Stage I, Stage II, Stage III, Triple receptor negative

Phase: III

Therapy: niraparib

Locations: Argentina, Australia, Austria, Belgium, Brazil, Canada, Chile, Colombia, Finland, France, Germany, Ireland, Italy, Japan, Mexico, Netherlands, Norway, Poland, Russian Federation, South Africa, Spain, Switzerland, United Kingdom, United States

US States: CA, CO, IL, MI, ND, NM, NY, PA, SD, TX, VA, WA

Contact: US GSK Clinical Trials Call Center [877-379-3718; GSKClinicalSupportHD@gsk.com]

BRCA2 K862Sfs*17 (continued)

NCT05085626
An Open, Single-center, Cohort Clinical Study of Fluzoparib in Combination With Chidamide or Camrelizumab for HRD Positive and HER2-negative Advanced Breast Cancer

Cancer type: Breast Cancer

Variant class: BRCA mutation or HR Deficient

Other inclusion criteria: ERBB2 negative, Hormone receptor status

Population segments: BRCA, Estrogen receptor positive, HER2 negative, Progesterone receptor positive, Second line, Stage IV, Third line

Phase: II

Therapies: fluzoparib, tucidinostat, camrelizumab

Location: China

NCT04644289
Window-of-opportunity Proof-of-concept, Non-randomized, Open-label Phase II Trial of Olaparib Given Alone (Cohort A) or in Combination With Durvalumab (Cohort B) Prior to Primary Debulking Surgery in Histologically Proven High-grade Epithelial Ovarian Cancer (EOC)

Cancer type: Breast Cancer

Variant class: BRCA mutation

Other identifiers: AGO-OVAR 27, AGO-OVAR27, EudraCT Number: 2020-005101-12, WoO

Population segments: BRCA, First line, Maintenance/Consolidation, Stage II, Stage III, Stage IV

Phase: II

Therapies: olaparib, durvalumab

Location: Germany

NCT04711824
Phase I/II Study of Stereotactic Radiosurgery with Concurrent Administration of DNA Damage Response (DDR) Inhibitor (Olaparib) Followed by Adjuvant Combination of Durvalumab (MEDI4736) and Physician's Choice Systemic Therapy in Subjects with Breast Cancer Brain Metastases

Cancer type: Breast Cancer

Variant class: BRCA mutation

Other inclusion criteria: ERBB2 negative

Other identifier: HCRN BRE18-360

Population segments: Adjuvant, BRCA, CNS mets, HER2 negative, Stage IV, Triple receptor negative

Phase: I/II

Therapies: olaparib, radiation therapy, durvalumab, chemotherapy

Location: United States

US States: AL, NC

Contact: Dr. Colette Shen [984-974-8429; colette_shen@med.unc.edu]

BRCA2 K862Sfs*17 (continued)

NCT02264678
A Modular Phase I, Open-Label, Multicentre Study to Assess the Safety, Tolerability, Pharmacokinetics and Preliminary Anti-tumour Activity of Ceralasertib in Combination With Cytotoxic Chemotherapy and/or DNA Damage Repair/Novel Anti-cancer Agents in Patients With Advanced Solid Malignancies.

Cancer type: Breast Cancer

Variant class: BRCA mutation

Other inclusion criteria: ERBB2 negative

Other identifiers: 0C-14-9, 16-031, 18-342, D5330C00004, EudraCT Number: 2014-002233-66, IRAS ID 160200, NCI-2015-00687, Study 4

Population segments: Adenocarcinoma, BRCA, HER2 negative, Pulmonary, Second line, Stage III, Stage IV, Third line, Triple receptor negative

Exclusion criteria variant class: ERBB2 positive

Phase: I

Therapies: ceralasertib, olaparib

Locations: France, Republic of Korea, United Kingdom, United States

US States: CA, MA, NY

Contact: AstraZeneca Clinical Study Information Center [877-240-9479; information.center@astrazeneca.com]

NCT04169841
Precision Medicine Phase II Study Evaluating the Efficacy of a Double Immunotherapy by Durvalumab and Tremelimumab Combined With Olaparib in Patients With Solid Cancers and Carriers of Homologous Recombination Repair Genes Mutation in Response or Stable After Olaparib Treatment

Cancer type: Breast Cancer

Variant class: HRR mutation

Other identifiers: EudraCT Number: 2018–002971-17, GUIDE2REPAIR

Population segments: Fourth line or greater, Hormone refractory, Maintenance/ Consolidation, Second line, Stage III, Stage IV, Third line

Phase: II

Therapies: durvalumab, tremelimumab, olaparib

Location: France

NCT05002868
A Multi-center, Open-label, Phase I/Ib Study to Assess the Safety, Pharmacokinetics and Anti-tumor Activity of RP12146, a Poly (ADP-ribose) Polymerase (PARP) Inhibitor, in Patients With Locally Advanced or Metastatic Solid Tumors

Cancer type: Breast Cancer

Variant class: HRR mutation

Other identifier: RP12146-2101

Population segments: Extensive, Pulmonary, Second line, Stage III, Stage IV

Exclusion criteria variant class: ERBB2 positive

Phase: I

Therapy: RP12146

Locations: Czech Republic, Poland

BRCA2 K862Sfs*17 (continued)

NCT04095273
A Multicenter, Non-randomized, Open-label Phase 1b Study to Determine the Maximum Tolerated and Recommended Phase 2 Dose of the ATR Inhibitor Elimusertib in Combination With Pembrolizumab and to Characterize Its Safety, Tolerability, Pharmacokinetics and Preliminary Anti-tumor Activity in Participants With Advanced Solid Tumors

Cancer type: Breast Cancer

Variant class: DNA repair mutation

Other inclusion criteria: ATM mutation negative, ERBB2 negative, Hormone receptor positive

Other identifiers: 19741, EudraCT Number: 2018-003420-36, Keynote 919, NCI-2019-06734

Population segments: Fourth line or greater, HER2 negative, Hormone refractory, Second line, Stage III, Stage IV

Phase: I

Therapies: elimusertib, pembrolizumab

Locations: Germany, Spain, Switzerland, United Kingdom, United States

US States: CA, CT, MA, MD, NC, NY, OH, TX

Contact: Bayer Clinical Trials Contact [clinical-trials-contact@bayer.com]

NCT02810743
Substantially Improving the Cure Rate of High-risk BRCA1-like Breast Cancer Patients With Personalized Therapy (SUBITO) - an International Randomized Phase III Trial

Cancer type: Breast Cancer

Variant class: HR Deficient

Other inclusion criteria: ERBB2 negative

Other identifiers: EudraCT Number: 2016-002493-13, M16BRC, NL58091.031.16, SUBITO

Population segments: Adjuvant, HER2 negative, Neoadjuvant, Stage III

Phase: III

Therapies: chemotherapy, olaparib

Locations: France, Netherlands

NCT04240106
Multicenter,Open-label,Phase II Clinical Trial to Evaluate the Efficacy and Safety of Niraparib + Aromatase Inhibitors for(HR)+/(HER2)-, MBC With Either Germline BRCA-mutated or Germinal BRCA-wildtype and Homologous Recombination Deficiency

Cancer type: Breast Cancer

Variant class: HR Deficient

Other inclusion criteria: BRCA1 germline wild type, ERBB2 negative, Hormone receptor positive or BRCA2 germline wild type, ERBB2 negative, Hormone receptor positive

Other identifiers: EudraCT Number: 2017-004323-72, LUZERN, MedOPP190

Population segments: BRCA, Estrogen receptor positive, HER2 negative, Progesterone receptor positive, Second line, Stage I, Stage II, Stage III, Stage IV, Third line

Exclusion criteria variant classes: ERBB2 amplification, ERBB2 overexpression

Phase: II

Therapies: niraparib, hormone therapy

Location: Spain

BRCA2 K862Sfs*17 (continued)

No NCT ID - see other identifier(s)
Phase II Clinical Trial of the PARP Inhibitor, Olaparib, in HR-Deficient Metastatic Breast and Relapsed Ovarian Cancer in Patients Without Germline Mutations in BRCA1 and BRCA2: The EMBRACE study

Cancer type: Breast Cancer

Variant class: HR Deficient

Other inclusion criteria: BRCA1 germline mutation negative, BRCA2 germline mutation negative

Other identifiers: ACTRN12617000855325, CTC0160, EMBRACE study

Population segments: HER2 negative, Second line, Stage IV, Triple receptor negative

Exclusion criteria variant classes: BRCA1 germline mutation, BRCA2 germline mutation

Phase: II

Therapy: olaparib

Location: Australia

NCT05261269
A Dose-escalation Study of the Safety and Pharmacology of DAN-222 in Subjects With Metastatic Breast Cancer

Cancer type: Breast Cancer

Variant class: HR Deficient

Other inclusion criteria: ERBB2 negative

Other identifier: DAN-22220205

Population segments: BRCA, Estrogen receptor positive, HER2 negative, Progesterone receptor positive, Stage IV, Third line

Phase: I

Therapies: DAN-222, niraparib

Location: United States

US State: TN

Contact: Dr. Timothy Hagerty [clinical@dantari.com]

NCT04992013
Genomically Guided Phase II Study to Evaluate the Clinical Benefit of Niraparib in Tumors Metastatic to the CNS

Cancer type: Unspecified Solid Tumor

Variant class: BRCA2 mutation or HR Deficient

Other identifier: 21-154

Population segments: BRCA, CNS mets, HER2 negative, Second line, Stage IV, Triple receptor negative

Phase: II

Therapy: niraparib

Location: United States

US State: MA

Contact: Dr. Priscilla Brastianos [617-643-1938; pbrastianos@mgh.harvard.edu]

BRCA2 K862Sfs*17 (continued)

NCT02029001
A Two-period, Multicenter, Randomized, Open-label, Phase II Study Evaluating the Clinical Benefit of a Maintenance Treatment Targeting Tumor Molecular Alterations in Patients with Progressive Locally-advanced or Metastatic Solid Tumors.

Cancer type: Unspecified Solid Tumor

Variant class: BRCA2 mutation

Other identifiers: ET12-081, EudraCT Number: 2012-004510-34, MOST, ProfiLER

Population segments: Maintenance/Consolidation, Second line, Stage III, Stage IV, Third line

Phase: II

Therapy: olaparib

Location: France

NCT03967938
Efficacy of Olaparib in Advanced Cancers Occurring in Patients With Germline Mutations or Somatic Tumor Mutations in Homologous Recombination Genes

Cancer type: Unspecified Solid Tumor

Variant class: BRCA2 mutation

Other identifiers: 1-2018 BSMO, 1-2018BSMO, EudraCT Number: 2018-002966-37, Precision 2 - Olaparib

Population segments: Line of therapy N/A, Stage III, Stage IV

Exclusion criteria variant classes: BRCA1 germline mutation, BRCA2 germline mutation

Phase: II

Therapy: olaparib

Location: Belgium

NCT02693535
Targeted Agent and Profiling Utilization Registry (TAPUR) Study

Cancer type: Unspecified Solid Tumor

Variant class: BRCA2 mutation

Other identifiers: 20170529, NCI-2017-00510, Pro00014171, TAPUR

Population segments: Aggressive, BRAF, Diffuse large B-cell lymphoma (DLBCL), Extranodal marginal zone B-cell lymphoma (MALT), FGFR, First line, Follicular lymphoma (FL), Fourth line or greater, Indolent, Lymphoblastic lymphoma (LBL), Mantle cell lymphoma (MCL), Other subtype, Second line, Small lymphocytic lymphoma (SLL), Stage III, Stage IV, Third line, Waldenstrom's macroglobulinemia (WM)

Phase: II

Therapies: olaparib, talazoparib, atezolizumab + talazoparib

Location: United States

US States: AL, AZ, CA, CT, FL, GA, HI, IL, IN, ME, MI, NC, ND, NE, NH, NM, NY, OH, OR, PA, SC, SD, TN, TX, UT, VA, WA, WI

Contact: Pam Mangat [pam.mangat@asco.org]

BRCA2 K862Sfs*17 (continued)

NCT04985721
An Open Label, Signal Seeking, Translational, Phase II Trial of Pamiparib in Combination With Tislelizumab in Patients With Advanced Tumours With Homologous Recombination Repair Defects

Cancer type: Unspecified Solid Tumor

Variant class: BRCA2 mutation or HR Deficient

Other identifiers: 20/044, IMPARP-HRD

Population segments: (N/A), BRCA, Line of therapy N/A

Phase: II

Therapies: pamiparib, tislelizumab

Location: Australia

NCT04550494
A Pharmacodynamics-Driven Trial of Talazoparib, an Oral PARP Inhibitor, in Patients With Advanced Solid Tumors and Aberrations in Genes Involved in DNA Damage Response

Cancer type: Unspecified Solid Tumor

Variant class: BRCA2 mutation

Other identifiers: 000246, 000264-C, 10000264, 10371, NCI-2020-06906

Population segments: BRCA, Fourth line or greater, HER2 positive, Hormone refractory, Second line, Stage II, Stage III, Stage IV, Third line

Phase: II

Therapy: talazoparib

Location: United States

US States: MD, OK

Contact: Multiple contacts: See www.clinicaltrials.gov for complete list of contacts.

NCT05071209
A Phase I/II Study of BAY 1895344 (Elimusertib, NSC#810486) in Pediatric Patients With Relapsed or Refractory Solid Tumors

Cancer type: Unspecified Solid Tumor

Variant class: BRCA2 mutation

Other identifiers: 21-494, NCI-2021-10751, PEPN2112

Population segments: (N/A), Aggressive, BRCA, Classical, Indolent, Nodular lymphocyte-predominant, Pediatric or Adolescent, Second line

Phase: I/II

Therapy: elimusertib

Location: United States

US States: AL, CA, CO, DC, IL, IN, MA, MI, MN, MO, NC, NY, OH, PA, TN, TX

Contact: Multiple contacts: See www.clinicaltrials.gov for complete list of contacts.

BRCA2 K862Sfs*17 (continued)

NCT02595931
Phase I Clinical Trial of M6620 (VX-970, Berzosertib) in Combination With the Topoisomerase I Inhibitor Irinotecan in Patients With Advanced Solid Tumors.

Cancer type: Unspecified Solid Tumor

Variant class: BRCA2 mutation

Other identifiers: 0C-16-6, 19-716, 2016-157, 201608110, 9938, HCC 15-164, LAO-PA015, NCI-2015-01915, PHI-87, UPCI 15-164, VICCPHI16154ET-CT

Population segments: Second line, Stage III, Stage IV

Phase: I

Therapies: berzosertib, chemotherapy

Location: United States

US States: CA, CT, MA, MO, PA, TN

Contact: Multiple contacts: See www.clinicaltrials.gov for complete list of contacts.

NCT05038839
A Phase I Study of Cabozantinib and Pamiparib to Evaluate Triple Inhibition of PARP, VEGFR and c-MET in Advanced Homologous Recombination Deficient Malignancies

Cancer type: Unspecified Solid Tumor

Variant class: BRCA2 mutation

Other identifiers: 2020-0308, NCI-2021-03248

Population segments: BRCA, Second line, Stage III, Stage IV

Phase: I

Therapies: cabozantinib, pamiparib

Location: United States

US State: TX

Contact: Siqing Fu [713-792-4318; siqingfu@mdanderson.org]

NCT03842228
A Phase Ib Biomarker-Driven Combination Trial of Copanlisib, Olaparib, and Durvalumab (MEDI4736) in Patients With Advanced Solid Tumors

Cancer type: Unspecified Solid Tumor

Variant class: BRCA2 mutation

Other identifiers: 10217, 19-628, NCI-2019-00601, NCI10217

Population segments: Line of therapy N/A, Stage III, Stage IV

Phase: I

Therapies: copanlisib, olaparib, durvalumab

Location: United States

US States: MA, TX

Contact: Multiple contacts: See www.clinicaltrials.gov for complete list of contacts.

BRCA2 K862Sfs*17 (continued)

NCT03415659
A Phase I, Open-label, Single-center, Single/Multiple-dose, Dose-escalation/ Dose-expansion Clinical Study on Tolerance and Pharmacokinetics of HWH340 Tablet in Patients With Advanced Solid Tumors

Cancer type: Unspecified Solid Tumor

Variant class: BRCA2 mutation

Other identifiers: CTR20171649, HWH340-RFPA 20170821, RFPA 20170821

Population segments: BRCA, Fourth line or greater, HER2 negative, Second line, Stage III, Stage IV, Third line

Phase: I

Therapy: HWH-340

Location: China

NCT03297606
Canadian Profiling and Targeted Agent Utilization Trial (CAPTUR): A Phase II Basket Trial

Cancer type: Unspecified Solid Tumor

Variant class: BRCA2 aberration or HR Deficient

Other identifiers: CA209-9DL, CAPTUR, ESR-17-12831, ML39800, PM1, WI233446

Population segments: Aggressive, Diffuse large B-cell lymphoma (DLBCL), Extranodal marginal zone B-cell lymphoma (MALT), First line, Follicular lymphoma (FL), Indolent, Lymphoblastic lymphoma (LBL), Mantle cell lymphoma (MCL), Other subtype, Second line, Stage III, Stage IV, Waldenstrom's macroglobulinemia (WM)

Phase: II

Therapy: olaparib

Location: Canada

NCT04174716
An Open-label, Multi-center, Phase Ib/ IIa Basket Trial of IDX-1197 in Patients With Homologous Recombination Repair Mutated Solid Tumors

Cancer type: Unspecified Solid Tumor

Variant class: HRR mutation

Other identifiers: ID-VDP-102, VASTUS

Population segments: (N/A), BRCA, First line, Pulmonary, Second line

Phase: I/II

Therapy: venadaparib

Location: Republic of Korea

NCT03767075
Basket of Baskets: A Modular, Open-label, Phase II, Multicentre Study To Evaluate Targeted Agents in Molecularly Selected Populations With Advanced Solid Tumours

Cancer type: Unspecified Solid Tumor

Variant class: DNA repair mutation

Other identifiers: (Basket of Baskets) (BoB), EudraCT number: 2017-005108-89, MO39164, NL65937.031.18, VHIO17002

Population segments: Second line, Stage III, Stage IV

Phase: II

Therapy: atezolizumab

Locations: France, Germany, Netherlands, Spain, Sweden, United Kingdom

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BRCA2 K862Sfs*17 (continued)

NCT04423185
Platform Study of Genotyping Guided Precision Medicine for Rare Tumors in China

Cancer type: Unspecified Solid Tumor

Variant class: HR Deficient

Other identifiers: ChiCTR2000039310, NCC2380, PLATFORM

Population segments: ALK, BRAF, BRCA, EGFR, Second line, Stage III, Stage IV

Phase: II

Therapy: niraparib

Location: China

NCT03742895
A Phase II Study of Olaparib Monotherapy in Participants With Previously Treated, Homologous Recombination Repair Mutation (HRRm) or Homologous Recombination Deficiency (HRD) Positive Advanced Cancer

Cancer type: Unspecified Solid Tumor

Variant class: HR Deficient

Other identifiers: (MK-7339-002 / LYNK-002), 19-139, 194694, 2018-01891, 7339-002, 7339-002-00, EudraCT Number: 2018-003007-19, IRAS ID: 255158, JapicCTI-194694, LYNK-002, LYNK002, MK-7339-002, MK7339-002, MK7339-002-00, NCI-2018-03519, PER-046-18, SNCTP000003157

Population segments: BRCA, Fourth line or greater, Second line, Stage III, Stage IV, Third line

Exclusion criteria variant class: BRCA germline mutation

Phase: II

Therapy: olaparib

Locations: Argentina, Australia, Canada, Colombia, Denmark, France, Guatemala, Ireland, Israel, Italy, Mexico, Peru, Republic of Korea, Romania, Spain, Switzerland, Turkey, United Kingdom, United States

US States: AZ, CA, CO, KY, MD, NE, NJ, NY, SD, UT, WA

Contact: Toll Free Number [888-577-8839; Trialsites@merck.com]

NCT04267939
An Open-label Phase Ib Study to Determine the Maximum Tolerated and/or Recommended Phase II Dose of the ATR Inhibitor BAY 1895344 in Combination With PARP Inhibitor Niraparib, in Patients With Recurrent Advanced Solid Tumors and Ovarian Cancer

Cancer type: Unspecified Solid Tumor

Variant class: DNA repair pathway

Other identifiers: 18595, 19-810, 2019-0471, 20-222, EudraCT Number: 2018-003930-34, NCI-2020-01405

Population segments: Maintenance/Consolidation, Second line, Stage III, Stage IV

Phase: I

Therapies: elimusertib, niraparib

Location: United States

US States: MA, NY, TX

Contact: Bayer Clinical Trials Contact [888-842-2937; clinical-trials-contact@bayer.com]

BRCA2 K862Sfs*17 (continued)

NCT04693468
Modular Phase IB Hypothesis-Testing, Biomarker-Driven, Talazoparib Combination Trial (TalaCom)

Cancer type: Unspecified Solid Tumor

Variant class: DNA repair pathway

Other identifiers: 2020-0436, NCI-2020-06041, TalaCom

Population segments: Hormone refractory, Second line, Stage III, Stage IV

Phase: I

Therapies: talazoparib, palbociclib, axitinib, crizotinib

Location: United States

US State: TX

Contact: Timothy A. Yap [713-563-1784; tyap@mdanderson.org]

CHEK1 I471Vfs*17

NCT04053322
An International Multicenter Phase II Trial of Durvalumab (MEDI4736) Plus OLAparib Plus Fulvestrant in Metastatic or Locally Advanced ER-positive, HER2-negative Breast Cancer Patients Selected Using Criteria That Predict Sensitivity to Olaparib

Cancer type: Breast Cancer

Variant class: CHEK1 mutation

Other inclusion criteria: ERBB2 negative, ER positive

Other identifiers: CADUSEIME08, DOLAF, EudraCT Number: 2018-003832-57, UC-0140/1812

Population segments: BRCA, Estrogen receptor positive, FGFR, HER2 negative, Second line, Stage III, Stage IV

Phase: II

Therapies: durvalumab, olaparib, hormone therapy

Location: France

NCT04892693
Talazoparib in Advanced Breast Cancer Patients With Homologous Recombinant Deficiency: A Phase II Clinical and Exploratory Biomarker Study of Talazoparib

Cancer type: Breast Cancer

Variant class: CHEK1 mutation

Other identifier: H-2009-079-1157

Population segments: BRCA, Line of therapy N/A, Stage III, Stage IV

Phase: II

Therapy: talazoparib

Location: Republic of Korea

CHEK1 I471Vfs*17 (continued)

NCT04586335
Open Label, Phase Ib Study to Evaluate the Safety, Tolerability, Pharmacokinetics and Clinical Activity of CYH33, an Oral a-specific PI3K Inhibitor in Combination With Olaparib, an Oral PARP Inhibitor in Patients With Advanced Solid Tumors.

Cancer type: Breast Cancer

Variant class: CHEK1 mutation

Other identifiers: CTR20202339, CYH33-G102

Population segments: BRCA, Second line, Stage III, Stage IV

Phase: I

Therapies: HH-CYH33, olaparib

Locations: Australia, United States

US State: TX

Contact: Dr. Jason Sudia [908-380-1329; jason.sudia@haihepharma.com]

NCT04169841
Precision Medicine Phase II Study Evaluating the Efficacy of a Double Immunotherapy by Durvalumab and Tremelimumab Combined With Olaparib in Patients With Solid Cancers and Carriers of Homologous Recombination Repair Genes Mutation in Response or Stable After Olaparib Treatment

Cancer type: Breast Cancer

Variant class: HRR mutation

Other identifiers: EudraCT Number: 2018–002971-17, GUIDE2REPAIR

Population segments: Fourth line or greater, Hormone refractory, Maintenance/ Consolidation, Second line, Stage III, Stage IV, Third line

Phase: II

Therapies: durvalumab, tremelimumab, olaparib

Location: France

NCT05002868
A Multi-center, Open-label, Phase I/Ib Study to Assess the Safety, Pharmacokinetics and Anti-tumor Activity of RP12146, a Poly (ADP-ribose) Polymerase (PARP) Inhibitor, in Patients With Locally Advanced or Metastatic Solid Tumors

Cancer type: Breast Cancer

Variant class: HRR mutation

Other identifier: RP12146-2101

Population segments: Extensive, Pulmonary, Second line, Stage III, Stage IV

Exclusion criteria variant class: ERBB2 positive

Phase: I

Therapy: RP12146

Locations: Czech Republic, Poland

CHEK1 I471Vfs*17 (continued)

NCT03344965
A Phase II Study of Olaparib Monotherapy in Metastatic Breast Cancer Patients With Germline or Somatic Mutations in DNA Repair Genes (Olaparib Expanded)

Cancer type: Breast Cancer

Variant class: DNA repair mutation

Other inclusion criteria: BRCA1 germline mutation negative, BRCA2 germline mutation negative

Other identifiers: 17-428, 18-414, NCI-2018-00778, TBCRC 048, TBCRC048

Population segments: BRCA, Estrogen receptor positive, HER2 negative, HER2 positive, Progesterone receptor positive, Second line, Stage IV

Exclusion criteria variant classes: BRCA1 germline mutation, BRCA2 germline mutation

Phase: II

Therapy: olaparib

Location: United States

US States: AL, IL, MA, MD, NC, NJ, NY, PA, WA

Contact: Dr. Nadine Tung [617-667-1962; ntung@bidmc.harvard.edu]

NCT04095273
A Multicenter, Non-randomized, Open-label Phase 1b Study to Determine the Maximum Tolerated and Recommended Phase 2 Dose of the ATR Inhibitor Elimusertib in Combination With Pembrolizumab and to Characterize Its Safety, Tolerability, Pharmacokinetics and Preliminary Anti-tumor Activity in Participants With Advanced Solid Tumors

Cancer type: Breast Cancer

Variant class: DNA repair mutation

Other inclusion criteria: ATM mutation negative, ERBB2 negative, Hormone receptor positive

Other identifiers: 19741, EudraCT Number: 2018-003420-36, Keynote 919, NCI-2019-06734

Population segments: Fourth line or greater, HER2 negative, Hormone refractory, Second line, Stage III, Stage IV

Phase: I

Therapies: elimusertib, pembrolizumab

Locations: Germany, Spain, Switzerland, United Kingdom, United States

US States: CA, CT, MA, MD, NC, NY, OH, TX

Contact: Bayer Clinical Trials Contact [clinical-trials-contact@bayer.com]

NCT02810743
Substantially Improving the Cure Rate of High-risk BRCA1-like Breast Cancer Patients With Personalized Therapy (SUBITO) - an International Randomized Phase III Trial

Cancer type: Breast Cancer

Variant class: HR Deficient

Other inclusion criteria: ERBB2 negative

Other identifiers: EudraCT Number: 2016-002493-13, M16BRC, NL58091.031.16, SUBITO

Population segments: Adjuvant, HER2 negative, Neoadjuvant, Stage III

Phase: III

Therapies: chemotherapy, olaparib

Locations: France, Netherlands

CHEK1 I471Vfs*17 (continued)

NCT05085626
An Open, Single-center, Cohort Clinical Study of Fluzoparib in Combination With Chidamide or Camrelizumab for HRD Positive and HER2-negative Advanced Breast Cancer

Cancer type: Breast Cancer

Variant class: HR Deficient

Other inclusion criteria: ERBB2 negative, Hormone receptor status

Population segments: BRCA, Estrogen receptor positive, HER2 negative, Progesterone receptor positive, Second line, Stage IV, Third line

Phase: II

Therapies: fluzoparib, tucidinostat, camrelizumab

Location: China

NCT04240106
Multicenter,Open-label,Phase II Clinical Trial to Evaluate the Efficacy and Safety of Niraparib + Aromatase Inhibitors for(HR)+/(HER2)-, MBC With Either Germline BRCA-mutated or Germinal BRCA-wildtype and Homologous Recombination Deficiency

Cancer type: Breast Cancer

Variant class: HR Deficient

Other inclusion criteria: BRCA1 germline wild type, ERBB2 negative, Hormone receptor positive or BRCA2 germline wild type, ERBB2 negative, Hormone receptor positive

Other identifiers: EudraCT Number: 2017-004323-72, LUZERN, MedOPP190

Population segments: BRCA, Estrogen receptor positive, HER2 negative, Progesterone receptor positive, Second line, Stage I, Stage II, Stage III, Stage IV, Third line

Exclusion criteria variant classes: ERBB2 amplification, ERBB2 overexpression

Phase: II

Therapies: niraparib, hormone therapy

Location: Spain

No NCT ID - see other identifier(s)
Phase II Clinical Trial of the PARP Inhibitor, Olaparib, in HR-Deficient Metastatic Breast and Relapsed Ovarian Cancer in Patients Without Germline Mutations in BRCA1 and BRCA2: The EMBRACE study

Cancer type: Breast Cancer

Variant class: HR Deficient

Other inclusion criteria: BRCA1 germline mutation negative, BRCA2 germline mutation negative

Other identifiers: ACTRN12617000855325, CTC0160, EMBRACE study

Population segments: HER2 negative, Second line, Stage IV, Triple receptor negative

Exclusion criteria variant classes: BRCA1 germline mutation, BRCA2 germline mutation

Phase: II

Therapy: olaparib

Location: Australia

CHEK1 I471Vfs*17 (continued)

NCT05261269
A Dose-escalation Study of the Safety and Pharmacology of DAN-222 in Subjects With Metastatic Breast Cancer

Cancer type: Breast Cancer

Variant class: HR Deficient

Other inclusion criteria: ERBB2 negative

Other identifier: DAN-22220205

Population segments: BRCA, Estrogen receptor positive, HER2 negative, Progesterone receptor positive, Stage IV, Third line

Phase: I

Therapies: DAN-222, niraparib

Location: United States

US State: TN

Contact: Dr. Timothy Hagerty [clinical@dantari.com]

NCT04550494
A Pharmacodynamics-Driven Trial of Talazoparib, an Oral PARP Inhibitor, in Patients With Advanced Solid Tumors and Aberrations in Genes Involved in DNA Damage Response

Cancer type: Unspecified Solid Tumor

Variant class: CHEK1 truncating mutation

Other identifiers: 000246, 000264-C, 10000264, 10371, NCI-2020-06906

Population segments: BRCA, Fourth line or greater, HER2 positive, Hormone refractory, Second line, Stage II, Stage III, Stage IV, Third line

Phase: II

Therapy: talazoparib

Location: United States

US States: MD, OK

Contact: Multiple contacts: See www.clinicaltrials.gov for complete list of contacts.

NCT03742895
A Phase II Study of Olaparib Monotherapy in Participants With Previously Treated, Homologous Recombination Repair Mutation (HRRm) or Homologous Recombination Deficiency (HRD) Positive Advanced Cancer

Cancer type: Unspecified Solid Tumor

Variant class: CHEK1 mutation or HR Deficient

Other identifiers: (MK-7339-002 / LYNK-002), 19-139, 194694, 2018-01891, 7339-002, 7339-002-00, EudraCT Number: 2018-003007-19, IRAS ID: 255158, JapicCTI-194694, LYNK-002, LYNK002, MK-7339-002, MK7339-002, MK7339-002-00, NCI-2018-03519, PER-046-18, SNCTP000003157

Population segments: BRCA, Fourth line or greater, Second line, Stage III, Stage IV, Third line

Exclusion criteria variant class: BRCA germline mutation

Phase: II

Therapy: olaparib

Locations: Argentina, Australia, Canada, Colombia, Denmark, France, Guatemala, Ireland, Israel, Italy, Mexico, Peru, Republic of Korea, Romania, Spain, Switzerland, Turkey, United Kingdom, United States

US States: AZ, CA, CO, KY, MD, NE, NJ, NY, SD, UT, WA

Contact: Toll Free Number [888-577-8839; Trialsites@merck.com]

CHEK1 I471Vfs*17 (continued)

NCT03967938
Efficacy of Olaparib in Advanced Cancers Occurring in Patients With Germline Mutations or Somatic Tumor Mutations in Homologous Recombination Genes

Cancer type: Unspecified Solid Tumor

Variant class: CHEK1 mutation

Other identifiers: 1-2018 BSMO, 1-2018BSMO, EudraCT Number: 2018-002966-37, Precision 2 - Olaparib

Population segments: Line of therapy N/A, Stage III, Stage IV

Exclusion criteria variant classes: BRCA1 germline mutation, BRCA2 germline mutation

Phase: II

Therapy: olaparib

Location: Belgium

NCT04985721
An Open Label, Signal Seeking, Translational, Phase II Trial of Pamiparib in Combination With Tislelizumab in Patients With Advanced Tumours With Homologous Recombination Repair Defects

Cancer type: Unspecified Solid Tumor

Variant class: CHEK1 mutation or HR Deficient

Other identifiers: 20/044, IMPARP-HRD

Population segments: (N/A), BRCA, Line of therapy N/A

Phase: II

Therapies: pamiparib, tislelizumab

Location: Australia

NCT05071209
A Phase I/II Study of BAY 1895344 (Elimusertib, NSC#810486) in Pediatric Patients With Relapsed or Refractory Solid Tumors

Cancer type: Unspecified Solid Tumor

Variant class: CHEK1 mutation

Other identifiers: 21-494, NCI-2021-10751, PEPN2112

Population segments: (N/A), Aggressive, BRCA, Classical, Indolent, Nodular lymphocyte-predominant, Pediatric or Adolescent, Second line

Phase: I/II

Therapy: elimusertib

Location: United States

US States: AL, CA, CO, DC, IL, IN, MA, MI, MN, MO, NC, NY, OH, PA, TN, TX

Contact: Multiple contacts: See www.clinicaltrials.gov for complete list of contacts.

CHEK1 I471Vfs*17 (continued)

NCT05038839
A Phase I Study of Cabozantinib and Pamiparib to Evaluate Triple Inhibition of PARP, VEGFR and c-MET in Advanced Homologous Recombination Deficient Malignancies

Cancer type: Unspecified Solid Tumor

Variant class: CHEK1 mutation

Other identifiers: 2020-0308, NCI-2021-03248

Population segments: BRCA, Second line, Stage III, Stage IV

Phase: I

Therapies: cabozantinib, pamiparib

Location: United States

US State: TX

Contact: Siqing Fu [713-792-4318; siqingfu@mdanderson.org]

NCT03842228
A Phase Ib Biomarker-Driven Combination Trial of Copanlisib, Olaparib, and Durvalumab (MEDI4736) in Patients With Advanced Solid Tumors

Cancer type: Unspecified Solid Tumor

Variant class: CHEK1 mutation

Other identifiers: 10217, 19-628, NCI-2019-00601, NCI10217

Population segments: Line of therapy N/A, Stage III, Stage IV

Phase: I

Therapies: copanlisib, olaparib, durvalumab

Location: United States

US States: MA, TX

Contact: Multiple contacts: See www.clinicaltrials.gov for complete list of contacts.

NCT02029001
A Two-period, Multicenter, Randomized, Open-label, Phase II Study Evaluating the Clinical Benefit of a Maintenance Treatment Targeting Tumor Molecular Alterations in Patients with Progressive Locally-advanced or Metastatic Solid Tumors.

Cancer type: Unspecified Solid Tumor

Variant class: HRR mutation

Other identifiers: ET12-081, EudraCT Number: 2012-004510-34, MOST, ProfiLER

Population segments: Maintenance/Consolidation, Second line, Stage III, Stage IV, Third line

Phase: II

Therapy: olaparib

Location: France

NCT04174716
An Open-label, Multi-center, Phase Ib/IIa Basket Trial of IDX-1197 in Patients With Homologous Recombination Repair Mutated Solid Tumors

Cancer type: Unspecified Solid Tumor

Variant class: HRR mutation

Other identifiers: ID-VDP-102, VASTUS

Population segments: (N/A), BRCA, First line, Pulmonary, Second line

Phase: I/II

Therapy: venadaparib

Location: Republic of Korea

CHEK1 I471Vfs*17 (continued)

NCT03767075
Basket of Baskets: A Modular, Open-label, Phase II, Multicentre Study To Evaluate Targeted Agents in Molecularly Selected Populations With Advanced Solid Tumours

Cancer type: Unspecified Solid Tumor

Variant class: DNA repair mutation

Other identifiers: (Basket of Baskets) (BoB), EudraCT number: 2017-005108-89, MO39164, NL65937.031.18, VHIO17002

Population segments: Second line, Stage III, Stage IV

Phase: II

Therapy: atezolizumab

Locations: France, Germany, Netherlands, Spain, Sweden, United Kingdom

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NCT04423185
Platform Study of Genotyping Guided Precision Medicine for Rare Tumors in China

Cancer type: Unspecified Solid Tumor

Variant class: HR Deficient

Other identifiers: ChiCTR2000039310, NCC2380, PLATFORM

Population segments: ALK, BRAF, BRCA, EGFR, Second line, Stage III, Stage IV

Phase: II

Therapy: niraparib

Location: China

NCT04992013
Genomically Guided Phase II Study to Evaluate the Clinical Benefit of Niraparib in Tumors Metastatic to the CNS

Cancer type: Unspecified Solid Tumor

Variant class: HR Deficient or DNA repair pathway

Other identifier: 21-154

Population segments: BRCA, CNS mets, HER2 negative, Second line, Stage IV, Triple receptor negative

Phase: II

Therapy: niraparib

Location: United States

US State: MA

Contact: Dr. Priscilla Brastianos [617-643-1938; pbrastianos@mgh.harvard.edu]

NCT03297606
Canadian Profiling and Targeted Agent Utilization Trial (CAPTUR): A Phase II Basket Trial

Cancer type: Unspecified Solid Tumor

Variant class: HR Deficient

Other identifiers: CA209-9DL, CAPTUR, ESR-17-12831, ML39800, PM1, WI233446

Population segments: Aggressive, Diffuse large B-cell lymphoma (DLBCL), Extranodal marginal zone B-cell lymphoma (MALT), First line, Follicular lymphoma (FL), Indolent, Lymphoblastic lymphoma (LBL), Mantle cell lymphoma (MCL), Other subtype, Second line, Stage III, Stage IV, Waldenstrom's macroglobulinemia (WM)

Phase: II

Therapy: olaparib

Location: Canada

CHEK1 I471Vfs*17 (continued)

NCT02595931
Phase I Clinical Trial of M6620 (VX-970, Berzosertib) in Combination With the Topoisomerase I Inhibitor Irinotecan in Patients With Advanced Solid Tumors.

Cancer type: Unspecified Solid Tumor

Variant class: DNA repair pathway

Other identifiers: 0C-16-6, 19-716, 2016-157, 201608110, 9938, HCC 15-164, LAO-PA015, NCI-2015-01915, PHI-87, UPCI 15-164, VICCPHI16154ET-CT

Population segments: Second line, Stage III, Stage IV

Phase: I

Therapies: berzosertib, chemotherapy

Location: United States

US States: CA, CT, MA, MO, PA, TN

Contact: Multiple contacts: See www.clinicaltrials.gov for complete list of contacts.

NCT04267939
An Open-label Phase Ib Study to Determine the Maximum Tolerated and/or Recommended Phase II Dose of the ATR Inhibitor BAY 1895344 in Combination With PARP Inhibitor Niraparib, in Patients With Recurrent Advanced Solid Tumors and Ovarian Cancer

Cancer type: Unspecified Solid Tumor

Variant class: DNA repair pathway

Other identifiers: 18595, 19-810, 2019-0471, 20-222, EudraCT Number: 2018-003930-34, NCI-2020-01405

Population segments: Maintenance/Consolidation, Second line, Stage III, Stage IV

Phase: I

Therapies: elimusertib, niraparib

Location: United States

US States: MA, NY, TX

Contact: Bayer Clinical Trials Contact [888-842-2937; clinical-trials-contact@bayer.com]

NCT04693468
Modular Phase IB Hypothesis-Testing, Biomarker-Driven, Talazoparib Combination Trial (TalaCom)

Cancer type: Unspecified Solid Tumor

Variant class: DNA repair pathway

Other identifiers: 2020-0436, NCI-2020-06041, TalaCom

Population segments: Hormone refractory, Second line, Stage III, Stage IV

Phase: I

Therapies: talazoparib, palbociclib, axitinib, crizotinib

Location: United States

US State: TX

Contact: Timothy A. Yap [713-563-1784; tyap@mdanderson.org]

ERBB2 I655V

NCT04579380
A Phase II Basket Study of Tucatinib in Combination With Trastuzumab in Subjects With Previously Treated, Locally Advanced Unresectable or Metastatic Solid Tumors Driven by HER2 Alterations

Cancer type: Breast Cancer

Variant class: ERBB2 I655V mutation

Other identifiers: 21-043, EudraCT Number: 2020-004873-29, IRAS ID: 292412, jRCT2031210113, NCI-2021-00125, RG1121359, RG1121359, S20-01641, SGNTUC-019, USOR 20344

Population segments: Adenocarcinoma, Estrogen receptor positive, HER2 negative, HER2 positive, Large Cell, Progesterone receptor positive, Second line, Stage III, Stage IV

Exclusion criteria variant classes: ERBB2 amplification, ERBB2 overexpression

Phase: II

Therapies: irbinitinib, trastuzumab

Locations: Belgium, Italy, Japan, Poland, Republic of Korea, Spain, United Kingdom, United States

US States: AZ, CA, CO, CT, DC, FL, GA, MA, MN, MO, NC, NE, NY, OH, PA, SC, TN, TX, UT, VA, WA, WI

Contact: Seagen Trial Information Support [866-333-7436; clinicaltrials@seagen.com]

No NCT ID - see other identifier(s)
Single Arm, Open Label, Signal Seeking, Phase IIa Trial Of The Activity Of Trastuzumab Emtansine (T-DM1) In Patients With Tumours Harbouring HER2 Amplifications Or Mutations

Cancer type: Breast Cancer

Variant class: ERBB2 activating mutation

Other identifiers: ACTRN12619001265167p, CTC0141-addendum 8, MoST Addendum 8, U1111-1182-6652

Population segments: HER2 positive, Second line, Stage III, Stage IV

Exclusion criteria variant class: ERBB2 amplification

Phase: II

Therapy: ado-trastuzumab emtansine

Location: Australia

NCT04355858
Precision Treatment of Luminal Advanced Breast Cancer Based on Molecular Subtyping

Cancer type: Breast Cancer

Variant class: ERBB2 activating mutation

Other inclusion criteria: ERBB2 negative, Hormone receptor positive

Other identifiers: MULAN, SCHBCC-N029

Population segments: Estrogen receptor positive, HER2 negative, Progesterone receptor positive, Second line, Stage III, Stage IV, Third line

Phase: II

Therapy: pyrotinib + chemotherapy

Location: China

ERBB2 I655V (continued)

NCT04591431
The Rome Trial From Histology to Target: the Road to Personalize Target Therapy and Immunotherapy

Cancer type: Breast Cancer

Variant class: ERBB2 mutation

Other identifiers: EudraCT Number: 2018-002190-21, MAR-BAS-18-005, ROME

Population segments: Second line, Stage IV

Phase: II

Therapies: trastuzumab, pertuzumab, ado-trastuzumab emtansine, lapatinib

Location: Italy

NCT04040699
A Phase Ib Study to Evaluate Efficacy, Safety and Tolerability of KN026 Combined With KN046 in Subjects With HER2 Positive Solid Tumor.

Cancer type: Breast Cancer

Variant class: ERBB2 mutation

Other identifiers: CXSL20000029, CXSL2000030, KN046-IST-02

Population segments: (N/A), Fourth line or greater, HER2 positive, Second line, Stage III, Stage IV, Third line

Phase: I

Therapies: KN026, KN046

Location: China

NCT05013554
A Phase I/Ib Open-label, First-in-human, Single Agent, Dose Escalation and Expansion Study for the Evaluation of Safety, Pharmacokinetics, Pharmacodynamics, and Anti-tumor Activity of SAR443216 in Participants with Relapsed/Refractory HER2 Expressing Solid Tumors.

Cancer type: Breast Cancer

Variant class: ERBB2 mutation

Other inclusion criteria: ERBB2 negative

Other identifiers: EudraCT Number: 2021-000086-32, TED16925, U1111-1253-2233

Population segments: HER2 positive, Second line, Stage III, Stage IV

Phase: I

Therapy: SAR-443216

Locations: Republic of Korea, Spain, Taiwan, United States

US State: TX

Contact: email recommended (Toll free number for US & Canada) [800-633-1610 ext Option 6; Contact-US@sanofi.com]

NCT03202316
A Phase II Study of Triple Combination of Atezolizumab + Cobimetinib + Eribulin (ACE) in Patients With Recurrent/ Metastatic Inflammatory Breast Cancer

Cancer type: Breast Cancer

Variant class: ERBB2 status

Other inclusion criteria: Hormone receptor status

Other identifiers: 2016-0890, NCI-2017-01601

Population segments: Estrogen receptor positive, HER2 negative, HER2 positive, Progesterone receptor positive, Second line, Stage III, Stage IV, Third line

Phase: II

Therapies: atezolizumab, cobimetinib, chemotherapy

Location: United States

US State: TX

Contact: Dr. Vicente Velaro [713-563-0751; vvalero@mdanderson.org]

ERBB2 I655V (continued)

NCT04215003
This is a Phase Ib/II, Prospective , Open-label, Single Center, Bayesian Adaptive Design, Umbrella Study Evaluating the Efficacy and Safety of Neo-adjuvant Therapy in Patients With Breast Cancer

Cancer type: Breast Cancer

Variant class: ERBB2 status

Other inclusion criteria: Hormone receptor status

Other identifier: SCHBCC0N026

Population segments: Estrogen receptor positive, HER2 negative, HER2 positive, Neoadjuvant, Progesterone receptor positive, Stage II, Stage III

Phase: I/II

Therapies: pertuzumab + trastuzumab + chemotherapy, trastuzumab + chemotherapy

Location: China

NCT04551521
Continuous ReAssessment With Flexible ExTension in Rare Malignancies - CRAFT: The NCT-PMO-1602 Phase II Trial

Cancer type: Unspecified Solid Tumor

Variant class: ERBB2 activating mutation

Other identifiers: CRAFT, EudraCT Number: 2019-003192-18, NCT-PMO-1602, NCT/DKTK MASTER

Population segments: ALK, BRAF, HER2 positive, Second line, Stage III, Stage IV

Phase: II

Therapy: atezolizumab + pertuzumab + trastuzumab

Location: Germany

NCT03255070
A Phase I, Multicenter, Open-label, Multiple Dose-escalation and Expansion Study of ARX788, as Monotherapy in Advanced Solid Tumors With HER2 Expression

Cancer type: Unspecified Solid Tumor

Variant class: ERBB2 activating mutation

Other identifiers: 17-001674, 201711014, ACE-Pan tumor-01, ACE-PAN-TUMOR-01, AMBRX ARX788-1711, ARX788-1711, NCI-2018-00274

Population segments: Adenocarcinoma, Fourth line or greater, HER2 positive, Second line, Stage III, Stage IV

Phase: I

Therapy: ARX-788

Locations: Australia, United States

US States: CA, MO, OH, TX

Contact: Trial Inquiry [858-875-2400; pantumor01trialinquiry@ambrx.com]

ERBB2 I655V (continued)

NCT04589845
Tumor-Agnostic Precision Immunooncology and Somatic Targeting Rational for You (TAPISTRY) Phase II Platform Trial

Cancer type: Unspecified Solid Tumor

Variant class: ERBB2 mutation

Other identifiers: 2021-00425, BO41932, EudraCT Number: 2020-001847-16, SNCTP000004623, TAPISTRY

Population segments: ALK, First line, HER2 positive, Second line, Stage III, Stage IV

Phase: II

Therapy: ado-trastuzumab emtansine

Locations: Australia, Belgium, Brazil, Canada, China, Denmark, France, Germany, Hong Kong, Israel, Italy, Japan, New Zealand, Poland, Portugal, Puerto Rico, Republic of Korea, Singapore, Spain, Swaziland, Switzerland, Taiwan, United Kingdom, United States

US States: AL, AZ, CA, DE, FL, GA, ID, IL, MD, ME, MI, MN, MO, MT, NJ, NM, NV, NY, OH, OR, PA, SC, TN, TX, VA, WA, WI

Contact: Reference Study ID Number: BO41932 [888-662-6728; Global-Roche-Genentech-Trials@gene.com]

NCT04632992
MyTACTIC: An Open-Label Phase II Study Evaluating Targeted Therapies in Patients Who Have Advanced Solid Tumors With Genomic Alterations or Protein Expression Patterns Predictive of Response

Cancer type: Unspecified Solid Tumor

Variant class: ERBB2 mutation

Other inclusion criteria: MMR deficient

Other identifiers: ML42439, MyTACTIC

Population segments: ALK, EGFR, HER2 negative, HER2 positive, Line of therapy N/A, Stage III, Stage IV

Exclusion criteria variant classes: Microsatellite instability-High, Tumor Mutational Burden

Phase: II

Therapies: ado-trastuzumab emtansine + atezolizumab, pertuzumab/trastuzumab/hyaluronidase-zzxf, pertuzumab/trastuzumab/hyaluronidase-zzxf + chemotherapy, ado-trastuzumab emtansine + irbinitinib

Location: United States

US States: AK, AL, AR, AZ, CA, CT, FL, ID, LA, MD, MI, MO, MT, NC, NE, NJ, NY, OH, OR, TN, TX, VA, WA

Contact: Reference Study ID Number: ML42439 [888-662-6728; global-roche-genentech-trials@gene.com]

NCT03810872
An Open Explorative Phase II, Open Label Study of Afatinib in the Treatment of Advanced Cancer Carrying an EGFR, a HER2 or a HER3 Mutation

Cancer type: Unspecified Cancer

Variant class: ERBB2 mutation

Other identifiers: 1200.264, 1200264, EudraCT Number: 2016-003411-34, Precision 2, Precision 2 - 1200.264, Precision 2 - Afatinib

Population segments: EGFR, HER2 positive, Second line, Squamous Cell, Stage III, Stage IV

Phase: II

Therapy: afatinib

Location: Belgium

ERBB2 I655V (continued)

NCT02693535
Targeted Agent and Profiling Utilization Registry (TAPUR) Study

Cancer type: Unspecified Solid Tumor

Variant class: ERBB2 mutation

Other identifiers: 20170529, NCI-2017-00510, Pro00014171, TAPUR

Population segments: Aggressive, BRAF, Diffuse large B-cell lymphoma (DLBCL), Extranodal marginal zone B-cell lymphoma (MALT), FGFR, First line, Follicular lymphoma (FL), Fourth line or greater, Indolent, Lymphoblastic lymphoma (LBL), Mantle cell lymphoma (MCL), Other subtype, Second line, Small lymphocytic lymphoma (SLL), Stage III, Stage IV, Third line, Waldenstrom's macroglobulinemia (WM)

Phase: II

Therapies: pertuzumab + trastuzumab, irbinitinib + trastuzumab

Location: United States

US States: AL, AZ, CA, CT, FL, GA, HI, IL, IN, ME, MI, NC, ND, NE, NH, NM, NY, OH, OR, PA, SC, SD, TN, TX, UT, VA, WA, WI

Contact: Pam Mangat [pam.mangat@asco.org]

NCT04423185
Platform Study of Genotyping Guided Precision Medicine for Rare Tumors in China

Cancer type: Unspecified Solid Tumor

Variant class: ERBB2 mutation

Other identifiers: ChiCTR2000039310, NCC2380, PLATFORM

Population segments: ALK, BRAF, BRCA, EGFR, Second line, Stage III, Stage IV

Phase: II

Therapy: pyrotinib

Location: China

NCT05315700
A Phase Ib/II, Single agent, Tumor-Agnostic Trial of ORIC-114 in Patients With Advanced Solid Tumors With EGFR or HER2 Exon 20 Alterations or HER2 Amplification And Will allow Patients With CNS Metastases that are Either Treated or Untreated But Asymptomatic.

Cancer type: Unspecified Solid Tumor

Variant class: ERBB2 mutation

Other identifier: ORIC-114-01

Population segments: CNS mets, EGFR, HER2 positive, Line of therapy N/A, Stage III, Stage IV

Exclusion criteria variant class: EGFR T790M mutation

Phase: I/II

Therapy: ORIC-114

Location: Republic of Korea

ERBB2 I655V (continued)

NCT04886804
An Open Label, Phase I Dose Escalation Trial, With Dose Confirmation and Expansion, of BI 1810631 as Monotherapy in Patients With Advanced or Metastatic Solid Tumors With HER2 Aberrations

Cancer type: Unspecified Solid Tumor

Variant class: ERBB2 mutation

Other identifiers: 1479-0001, CTR20220220, EudraCT Number: 2020-004563-47, jRCT2031210165

Population segments: ALK, BRAF, EGFR, HER2 positive, Second line, Stage III, Stage IV

Phase: I

Therapy: BI-1810631

Locations: China, Japan, Netherlands, United States

US State: TX

Contact: Boehringer Ingelheim [800-243-0127; clintriage.rdg@boehringer-ingelheim.com]

NCT03065387
Phase I Study of the Pan-ERBB Inhibitor Neratinib Given in Combination With Everolimus, Palbociclib, or Trametinib in Advanced Cancer Subjects With EGFR Mutation/Amplification, HER2 Mutation/Amplification, or HER3/4 Mutation or KRAS Mutation

Cancer type: Unspecified Solid Tumor

Variant class: ERBB2 mutation

Other identifiers: 2016-0430, NCI-2018-01218

Population segments: EGFR, HER2 negative, HER2 positive, Second line, Stage III, Stage IV

Phase: I

Therapies: neratinib, palbociclib, everolimus, trametinib

Location: United States

US State: TX

Contact: Dr. Sarina Piha-Paul [713-563-1930; spihapau@mdanderson.org]

NCT04446260
A Phase I Multi-Country, Multi-Center, Open-Label Study to Evaluate the Safety, Tolerability, Pharmacokinetics and Efficacy of SHR-A1811 in HER2 Expressing or Mutated Advanced Malignant Solid Tumor Subjects

Cancer type: Unspecified Solid Tumor

Variant class: ERBB2 mutation

Other identifiers: CTR20201638, SHR-A1811-I-101

Population segments: HER2 positive, Second line, Stage III, Stage IV

Phase: I

Therapy: SHR-A1811

Locations: Australia, China, Republic of Korea, Taiwan, United States

US States: NY, OH, SC, TX

Contact: Dr. Sherry Zhu [021-105-3363; zhuxiaoyu@hrglobe.cn]

ERBB2 I655V (continued)

NCT03297606
Canadian Profiling and Targeted Agent Utilization Trial (CAPTUR): A Phase II Basket Trial

Cancer type: Unspecified Solid Tumor

Variant class: ERBB2 aberration

Other identifiers: CA209-9DL, CAPTUR, ESR-17-12831, ML39800, PM1, WI233446

Population segments: Aggressive, Diffuse large B-cell lymphoma (DLBCL), Extranodal marginal zone B-cell lymphoma (MALT), First line, Follicular lymphoma (FL), Indolent, Lymphoblastic lymphoma (LBL), Mantle cell lymphoma (MCL), Other subtype, Second line, Stage III, Stage IV, Waldenstrom's macroglobulinemia (WM)

Phase: II

Therapy: pertuzumab + trastuzumab

Location: Canada

NCT04982926
A Phase I Study of TAS2940 in Patients With Locally Advanced or Metastatic Solid Tumors With EGFR and / or HER2 Aberrations

Cancer type: Unspecified Solid Tumor

Variant class: ERBB2 aberration

Other identifiers: EudraCT Number :2021-002189-41, TAS2940-101

Population segments: EGFR, HER2 positive, Second line, Stage III, Stage IV

Phase: I

Therapy: TAS 2940

Locations: France, United States

US States: TN, TX

Contact: Dr. Karim Benhadji [609-250-7336; clinicaltrialinfo@taihooncology.com]

FGFR4 G388R

NCT04936295
A Phase II Study of the Efficacy and Tolerability of Fulvestrant Plus Anlotinib in HR(+)/HER2(-) Metastatic Breast Cancer Patients With FGFR Mutation

Cancer type: Breast Cancer

Variant class: FGFR4 activating mutation

Other inclusion criteria: ERBB2 negative, Hormone receptor positive

Other identifier: SYSU005

Population segments: Estrogen receptor positive, FGFR, First line, HER2 negative, HER2 positive, Progesterone receptor positive, Stage IV

Phase: II

Therapies: hormone therapy, anlotinib hydrochloride

Location: China

FGFR4 G388R (continued)

NCT04572295
An Open-label Phase Ib Study of E7090 Monotherapy and in Combination With Other Anticancer Agents in Subjects With ER+, HER2- Recurrent/Metastatic Breast Cancer

Cancer type: Breast Cancer

Variant class: FGFR aberration

Other inclusion criteria: ERBB2 negative, ER positive

Other identifiers: E7090-J081-102, JapicCTI-205429

Population segments: Estrogen receptor positive, HER2 negative, Second line, Stage IV

Phase: I

Therapies: E-7090, hormone therapy

Location: Japan

NCT04504331
A Phase IB Study of Infigratinib in Combination With Tamoxifen in Hormone Receptor Positive, HER2 Negative, FGFR Altered Advanced Breast Cancer

Cancer type: Breast Cancer

Variant class: FGFR aberration

Other inclusion criteria: ERBB2 negative, Hormone receptor positive

Other identifiers: BRS0113, K08CA252457, NCI-2020-13784

Population segments: Estrogen receptor positive, HER2 negative, Progesterone receptor positive, Second line, Stage III, Stage IV, Triple receptor negative

Phase: I

Therapies: infigratinib, hormone therapy

Location: United States

US State: CA

Contact: Lisa Kody [650-498-8583; lkody@stanford.edu]

NCT04233567
A Phase II Study of Oral Infigratinib in Adult Patients With Advanced or Metastatic Solid Tumors With FGFR1-3 Gene Fusions or Other FGFR Genetic Alterations

Cancer type: Unspecified Solid Tumor

Variant class: FGFR activating mutation

Other identifiers: NCI-2019-06869, OSU-19041

Population segments: Second line, Stage III, Stage IV

Phase: II

Therapy: infigratinib

Location: United States

US State: OH

Contact: The Ohio State University Comprehensive Cancer Center [800-293-5066; OSUCCCClinicaltrials@osumc.edu]

FGFR4 G388R (continued)

NCT02272998
Phase II Study Of Ponatinib For Advanced Cancers With Genomic Alterations In Fibroblastic Growth Factor Receptor (FGFR) And Other Genomic Targets (KIT, Pdgfra, RET FLT3, ABL1)

Cancer type: Unspecified Solid Tumor

Variant class: FGFR activating mutation

Other identifiers: 14078, 2014C0143, NCI-2014-01499, OSU-14078

Population segments: Advanced, Second line, Stage IV

Exclusion criteria variant classes: FGFR3 K652E mutation, FLT3 D835F mutation, FLT3 D835H mutation, FLT3 D835V mutation, FLT3 D835Y mutation, FLT3 Y842C mutation, KIT D816V mutation, PDGFRA D842V mutation

Phase: II

Therapy: ponatinib

Location: United States

US State: OH

Contact: The Ohio State University Comprehensive Cancer Center [800-293-5066; Jamesline@osumc.edu]

NCT04083976
A Phase II Study of Erdafitinib in Subjects With Advanced Solid Tumors and FGFR Gene Alterations.

Cancer type: Unspecified Solid Tumor

Variant class: FGFR mutation

Other identifiers: 19-776, 20-069, 2019-0903, 42756493CAN2002, 42756493CAN2002 (RAGNAR), Amendment INT-1 / CHN-1, CAN2002, CR108661, CTR20200475, EudraCT Number: 2019-002113-19, IRAS ID: 271121, JANSSEN RAGNAR 42756493CAN2002, JapicCTI-205204, JXHL1900310, NCI-2019-07959, RAGNAR, RAGNAR CAN2002

Population segments: Estrogen receptor positive, FGFR, Progesterone receptor positive, Second line, Stage III, Stage IV

Exclusion criteria variant classes: FGFR1 V561 mutation, FGFR2 N549 mutation, FGFR2 V564 mutation, FGFR3 V555 mutation, FGFR4 V550 mutation

Phase: II

Therapy: erdafitinib

Locations: Argentina, Australia, Belgium, Brazil, China, France, Germany, Italy, Japan, Poland, Republic of Korea, Spain, United Kingdom, United States

US States: AZ, CO, FL, GA, HI, MA, ME, NC, NJ, NY, OH, PA, TN, TX, WA, WI

Contact: Study Contact [844-434-4210; Participate-In-This-Study@its.jnj.com]

NCT03929965
Anlotinib in Advanced Solid Tumors With FGFR Alteration

Cancer type: Unspecified Solid Tumor

Variant class: FGFR mutation

Other identifier: ASTFA

Population segments: Second line, Stage III, Stage IV, Third line

Phase: I

Therapy: anlotinib hydrochloride

Location: China

FGFR4 G388R (continued)

NCT05372120
A Phase II Clinical Trial to Evaluate the Efficacy and Safety of ICP-192 in Treated Patients With Advanced Solid Tumors With FGF/FGFR Gene Alterations

Cancer type: Unspecified Solid Tumor

Variant class: FGFR aberration

Other identifiers: CTR20212797, ICP-CL-00304

Population segments: FGFR, Second line, Stage III, Stage IV

Phase: II

Therapy: ICP-192

Location: China

NCT04565275
A Multi-center Open-label, Phase I/II Clinical Trial to Evaluate the Safety, Tolerability, Pharmacokinetics, and Pharmacodynamics of ICP-192 in Patients With Advanced Solid Tumors and FGFR Gene Alterations.

Cancer type: Unspecified Solid Tumor

Variant class: FGFR aberration

Other identifier: ICP-CL-00303

Population segments: (N/A), FGFR, Second line, Stage III, Stage IV, Unresectable

Phase: I/II

Therapy: ICP-192

Locations: Australia, United States

US States: AZ, CO, FL, MN, OH

Contact: Olivia Yang [609-524-0684; olivia.yang@INNOCAREPHARMA.COM]

No NCT ID - see other identifier(s)
Phase I Clinical Study of BPI-17509 In Patients With Advanced Solid Tumors

Cancer type: Solid Tumor

Variant class: FGFR aberration

Other identifiers: BTP-26811, CTR20192140

Population segments: FGFR, Second line, Stage III, Stage IV

Phase: I

Therapy: BPI-17509

Location: China

No NCT ID - see other identifier(s)
An Open-label, Multicenter, Phase I Clinical Study to Evaluate the Safety, Efficacy, and Pharmacokinetic/ Pharmacodynamic Characteristics of FH-2001 Capsules in Patients with Advanced Solid Tumors.

Cancer type: Unspecified Solid Tumor

Variant class: FGFR aberration

Other identifiers: CTR20220322, FH2001-I101

Population segments: FGFR, Second line, Stage II, Stage III, Stage IV

Phase: I

Therapy: FH-2001

Location: China

FGFR4 G388R (continued)

No NCT ID - see other identifier(s)
A Phase Ib Study to Assess the Safety, Tolerability, and Efficacy of TAS-120 (Futibatinib) in Combination with MK-3475 (Pembrolizumab) in Patients with Solid Tumors.

Cancer type: Unspecified Solid Tumor

Variant class: FGFR aberration

Other identifier: JapicCTI-195063

Population segments: FGFR, Line of therapy N/A, Stage III, Stage IV

Phase: I

Therapies: futibatinib, pembrolizumab

Location: Japan

TSC2 c.482-3C>T

NCT05331326
A Multicenter, Single Arm Phase II Clinical Study Evaluating the Efficacy and Safety of RC48-ADC for the Treatment of HER2-expression Metastatic Breast Cancer With Abnormal Activation of PAM Pathway

Cancer type: Breast Cancer

Variant class: PI3K/AKT/MTOR mutation

Other identifier: NCC3286

Population segments: HER2 positive, Second line, Stage III, Stage IV

Phase: II

Therapy: disitamab vedotin

Location: China

NCT04355858
Precision Treatment of Luminal Advanced Breast Cancer Based on Molecular Subtyping

Cancer type: Breast Cancer

Variant class: PI3K/AKT/MTOR mutation

Other inclusion criteria: ERBB2 negative, Hormone receptor positive

Other identifiers: MULAN, SCHBCC-N029

Population segments: Estrogen receptor positive, HER2 negative, Progesterone receptor positive, Second line, Stage III, Stage IV, Third line

Phase: II

Therapy: everolimus + chemotherapy

Location: China

NCT04215003
This is a Phase Ib/II, Prospective , Open-label, Single Center, Bayesian Adaptive Design, Umbrella Study Evaluating the Efficacy and Safety of Neo-adjuvant Therapy in Patients With Breast Cancer

Cancer type: Breast Cancer

Variant class: PI3K/AKT/MTOR pathway

Other inclusion criteria: ERBB2 negative, Hormone receptor positive

Other identifier: SCHBCC0N026

Population segments: Estrogen receptor positive, HER2 negative, HER2 positive, Neoadjuvant, Progesterone receptor positive, Stage II, Stage III

Phase: I/II

Therapy: alpelisib + dalpiciclib

Location: China

TSC2 c.482-3C>T (continued)

NCT04185831
MEGALiT - a Multicenter, Basket and Umbrella Explorative Trial on the Efficacy and Safety of Molecular Profile Selected Commercially Available Targeted Anti-cancer Drugs in Patients With Advanced Cancers Progressive on Standard Therapy

Cancer type: Unspecified Solid Tumor

Variant class: TSC2 mutation

Other identifiers: MEGALiT, MEGALiT1901

Population segments: Second line, Stage III, Stage IV

Phase: II

Therapy: everolimus

Location: Sweden

NCT03213678
NCI-COG Pediatric MATCH (Molecular Analysis for Therapy Choice)- Phase II Subprotocol of LY3023414 in Patients With Solid Tumors

Cancer type: Unspecified Solid Tumor

Variant class: TSC2 mutation

Other identifiers: 17-742, APEC 1621 D, APEC 1621-D, APEC1621 D, APEC1621D, NCI-2017-01249, NCI-COG Pediatric MATCH, OCR16978, Pediatric MATCH

Population segments: Aggressive, Indolent, Pediatric or Adolescent, Second line, Stage III, Stage IV

Phase: II

Therapy: samotolisib

Locations: Puerto Rico, United States

US States: AK, AL, AR, AZ, CA, CO, CT, DC, DE, FL, GA, IA, ID, IL, IN, KY, LA, MA, MD, ME, MI, MN, MO, MS, NC, ND, NE, NJ, NY, OH, OK, OR, PA, SC, SD, TN, TX, UT, VA, VT, WA, WI

Contact: Multiple contacts: See www.clinicaltrials.gov for complete list of contacts.

NCT02693535
Targeted Agent and Profiling Utilization Registry (TAPUR) Study

Cancer type: Unspecified Solid Tumor

Variant class: TSC2 mutation

Other identifiers: 20170529, NCI-2017-00510, Pro00014171, TAPUR

Population segments: Aggressive, BRAF, Diffuse large B-cell lymphoma (DLBCL), Extranodal marginal zone B-cell lymphoma (MALT), FGFR, First line, Follicular lymphoma (FL), Fourth line or greater, Indolent, Lymphoblastic lymphoma (LBL), Mantle cell lymphoma (MCL), Other subtype, Second line, Small lymphocytic lymphoma (SLL), Stage III, Stage IV, Third line, Waldenstrom's macroglobulinemia (WM)

Phase: II

Therapy: temsirolimus

Location: United States

US States: AL, AZ, CA, CT, FL, GA, HI, IL, IN, ME, MI, NC, ND, NE, NH, NM, NY, OH, OR, PA, SC, SD, TN, TX, UT, VA, WA, WI

Contact: Pam Mangat [pam.mangat@asco.org]

TSC2 c.482-3C>T (continued)

NCT05103358
A Phase II Multi-center Open-label Basket Trial of ABI-009 (Nab Sirolimus) for Adult and Adolescent Patients With Solid Tumors Harboring Pathogenic Inactivating Alterations in TSC1 or TSC2 Genes

Cancer type: Unspecified Solid Tumor

Variant class: TSC2 aberration

Other identifiers: PRECISION 1, PRECISION-1, TSC-007

Population segments: Second line, Stage III, Stage IV

Phase: II

Therapy: nab-rapamycin (Abraxis)

Location: United States

US States: FL, MA, NE, TN, TX, WI

Contact: Kevin Louis [513-579-9911 ext 16085; k.louis@medpace.com]

NCT03297606
Canadian Profiling and Targeted Agent Utilization Trial (CAPTUR): A Phase II Basket Trial

Cancer type: Unspecified Solid Tumor

Variant class: TSC2 aberration

Other identifiers: CA209-9DL, CAPTUR, ESR-17-12831, ML39800, PM1, WI233446

Population segments: Aggressive, Diffuse large B-cell lymphoma (DLBCL), Extranodal marginal zone B-cell lymphoma (MALT), First line, Follicular lymphoma (FL), Indolent, Lymphoblastic lymphoma (LBL), Mantle cell lymphoma (MCL), Other subtype, Second line, Stage III, Stage IV, Waldenstrom's macroglobulinemia (WM)

Phase: II

Therapy: temsirolimus

Location: Canada

NCT04551521
Continuous ReAssessment With Flexible ExTension in Rare Malignancies - CRAFT: The NCT-PMO-1602 Phase II Trial

Cancer type: Unspecified Solid Tumor

Variant class: PI3K/AKT/MTOR pathway

Other identifiers: CRAFT, EudraCT Number: 2019-003192-18, NCT-PMO-1602, NCT/DKTK MASTER

Population segments: ALK, BRAF, HER2 positive, Second line, Stage III, Stage IV

Phase: II

Therapies: atezolizumab + ipatasertib, atezolizumab + ipatasertib + chemotherapy

Location: Germany

NCT03673787
Ice-CAP: A Phase I Trial of Ipatasertib in Combination With Atezolizumab in Patients With Advanced Solid Tumours With PI3K Pathway Hyperactivation.

Cancer type: Unspecified Solid Tumor

Variant class: PI3K/AKT/MTOR pathway

Other identifiers: CCR4720, EudraCT Number: 2017-003005-18, IceCAP, Ice-CAP, IRAS ID 233461

Population segments: Hormone refractory, Second line, Stage III, Stage IV

Phase: I/II

Therapies: ipatasertib, atezolizumab

Location: United Kingdom

TSC2 c.482-3C>T (continued)

NCT04958226
An Open-label, Fixed-sequence Study to Assess the Effect of Repeated Doses of Capivasertib on the Pharmacokinetics of Oral Midazolam (a CYP450 3A Probe) in Patients With Advanced Solid Tumours Harbouring Alterations in the PI3K/AKT/PTEN Pathway

Cancer type: Unspecified Solid Tumor

Variant class: PI3K/AKT/MTOR pathway

Other identifiers: D3614C00003, NCI-2021-07861

Population segments: Second line, Stage III, Stage IV

Phase: I

Therapies: capivasertib, midazolam

Location: United States

US States: CO, NC, OH, PA, TX

Contact: AstraZeneca Clinical Study Information Center [877-240-9479; information.center@astrazeneca.com]

PMS2 K541Efs*3

NCT03344965
A Phase II Study of Olaparib Monotherapy in Metastatic Breast Cancer Patients With Germline or Somatic Mutations in DNA Repair Genes (Olaparib Expanded)

Cancer type: Breast Cancer

Variant class: DNA repair mutation

Other inclusion criteria: BRCA1 germline mutation negative, BRCA2 germline mutation negative

Other identifiers: 17-428, 18-414, NCI-2018-00778, TBCRC 048, TBCRC048

Population segments: BRCA, Estrogen receptor positive, HER2 negative, HER2 positive, Progesterone receptor positive, Second line, Stage IV

Exclusion criteria variant classes: BRCA1 germline mutation, BRCA2 germline mutation

Phase: II

Therapy: olaparib

Location: United States

US States: AL, IL, MA, MD, NC, NJ, NY, PA, WA

Contact: Dr. Nadine Tung [617-667-1962; ntung@bidmc.harvard.edu]

PMS2 K541Efs*3 (continued)

NCT04095273
A Multicenter, Non-randomized, Open-label Phase 1b Study to Determine the Maximum Tolerated and Recommended Phase 2 Dose of the ATR Inhibitor Elimusertib in Combination With Pembrolizumab and to Characterize Its Safety, Tolerability, Pharmacokinetics and Preliminary Anti-tumor Activity in Participants With Advanced Solid Tumors

Cancer type: Breast Cancer

Variant class: DNA repair mutation

Other inclusion criteria: ATM mutation negative, ERBB2 negative, Hormone receptor positive

Other identifiers: 19741, EudraCT Number: 2018-003420-36, Keynote 919, NCI-2019-06734

Population segments: Fourth line or greater, HER2 negative, Hormone refractory, Second line, Stage III, Stage IV

Phase: I

Therapies: elimusertib, pembrolizumab

Locations: Germany, Spain, Switzerland, United Kingdom, United States

US States: CA, CT, MA, MD, NC, NY, OH, TX

Contact: Bayer Clinical Trials Contact [clinical-trials-contact@bayer.com]

NCT05002868
A Multi-center, Open-label, Phase I/Ib Study to Assess the Safety, Pharmacokinetics and Anti-tumor Activity of RP12146, a Poly (ADP-ribose) Polymerase (PARP) Inhibitor, in Patients With Locally Advanced or Metastatic Solid Tumors

Cancer type: Breast Cancer

Variant class: DNA repair pathway

Other identifier: RP12146-2101

Population segments: Extensive, Pulmonary, Second line, Stage III, Stage IV

Exclusion criteria variant class: ERBB2 positive

Phase: I

Therapy: RP12146

Locations: Czech Republic, Poland

NCT03767075
Basket of Baskets: A Modular, Open-label, Phase II, Multicentre Study To Evaluate Targeted Agents in Molecularly Selected Populations With Advanced Solid Tumours

Cancer type: Unspecified Solid Tumor

Variant class: PMS2 mutation

Other identifiers: (Basket of Baskets) (BoB), EudraCT number: 2017-005108-89, MO39164, NL65937.031.18, VHIO17002

Population segments: Second line, Stage III, Stage IV

Phase: II

Therapy: atezolizumab

Locations: France, Germany, Netherlands, Spain, Sweden, United Kingdom

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PMS2 K541Efs*3 (continued)

NCT02693535
Targeted Agent and Profiling Utilization Registry (TAPUR) Study

Cancer type: Unspecified Solid Tumor

Variant class: PMS2 mutation

Other identifiers: 20170529, NCI-2017-00510, Pro00014171, TAPUR

Population segments: Aggressive, BRAF, Diffuse large B-cell lymphoma (DLBCL), Extranodal marginal zone B-cell lymphoma (MALT), FGFR, First line, Follicular lymphoma (FL), Fourth line or greater, Indolent, Lymphoblastic lymphoma (LBL), Mantle cell lymphoma (MCL), Other subtype, Second line, Small lymphocytic lymphoma (SLL), Stage III, Stage IV, Third line, Waldenstrom's macroglobulinemia (WM)

Phase: II

Therapy: ipilimumab + nivolumab

Location: United States

US States: AL, AZ, CA, CT, FL, GA, HI, IL, IN, ME, MI, NC, ND, NE, NH, NM, NY, OH, OR, PA, SC, SD, TN, TX, UT, VA, WA, WI

Contact: Pam Mangat [pam.mangat@asco.org]

NCT04500548
3CI Study: Childhood Cancer Combination Immunotherapy. Phase Ib and Expansion Study of Nivolumab Combination Immunotherapy in Children, Adolescent, and Young Adult (CAYA) Patients With Relapsed/Refractory Hypermutant Cancers

Cancer type: Unspecified Solid Tumor

Variant class: PMS2 mutation

Other identifiers: 3CI Study, NCI-2020-05617, PED-CITN-0

Population segments: (N/A), Aggressive, First line, Indolent, Pediatric or Adolescent, Second line, Untreated

Phase: I

Therapies: nivolumab, ipilimumab

Locations: Canada, United States

US States: CA, CO, MO, TX, WA, WI

Contact: Multiple contacts: See www.clinicaltrials.gov for complete list of contacts.

NCT04992013
Genomically Guided Phase II Study to Evaluate the Clinical Benefit of Niraparib in Tumors Metastatic to the CNS

Cancer type: Unspecified Solid Tumor

Variant class: DNA repair pathway

Other identifier: 21-154

Population segments: BRCA, CNS mets, HER2 negative, Second line, Stage IV, Triple receptor negative

Phase: II

Therapy: niraparib

Location: United States

US State: MA

Contact: Dr. Priscilla Brastianos [617-643-1938; pbrastianos@mgh.harvard.edu]

PMS2 K541Efs*3 (continued)

NCT02595931
Phase I Clinical Trial of M6620 (VX-970, Berzosertib) in Combination With the Topoisomerase I Inhibitor Irinotecan in Patients With Advanced Solid Tumors.

Cancer type: Unspecified Solid Tumor

Variant class: DNA repair pathway

Other identifiers: 0C-16-6, 19-716, 2016-157, 201608110, 9938, HCC 15-164, LAO-PA015, NCI-2015-01915, PHI-87, UPCI 15-164, VICCPHI16154ET-CT

Population segments: Second line, Stage III, Stage IV

Phase: I

Therapies: berzosertib, chemotherapy

Location: United States

US States: CA, CT, MA, MO, PA, TN

Contact: Multiple contacts: See www.clinicaltrials.gov for complete list of contacts.

NCT04267939
An Open-label Phase Ib Study to Determine the Maximum Tolerated and/or Recommended Phase II Dose of the ATR Inhibitor BAY 1895344 in Combination With PARP Inhibitor Niraparib, in Patients With Recurrent Advanced Solid Tumors and Ovarian Cancer

Cancer type: Unspecified Solid Tumor

Variant class: DNA repair pathway

Other identifiers: 18595, 19-810, 2019-0471, 20-222, EudraCT Number: 2018-003930-34, NCI-2020-01405

Population segments: Maintenance/Consolidation, Second line, Stage III, Stage IV

Phase: I

Therapies: elimusertib, niraparib

Location: United States

US States: MA, NY, TX

Contact: Bayer Clinical Trials Contact [888-842-2937; clinical-trials-contact@bayer.com]

NCT04693468
Modular Phase IB Hypothesis-Testing, Biomarker-Driven, Talazoparib Combination Trial (TalaCom)

Cancer type: Unspecified Solid Tumor

Variant class: DNA repair pathway

Other identifiers: 2020-0436, NCI-2020-06041, TalaCom

Population segments: Hormone refractory, Second line, Stage III, Stage IV

Phase: I

Therapies: talazoparib, palbociclib, axitinib, crizotinib

Location: United States

US State: TX

Contact: Timothy A. Yap [713-563-1784; tyap@mdanderson.org]

CCND1 amplification

NCT03310879
A Phase II Study of the CDK4/6 Inhibitor Abemaciclib in Patients With Solid Tumors Harboring Genetic Alterations in Genes Encoding D-type Cyclins or Amplification of CDK4 or CDK6

Cancer type: Unspecified Solid Tumor

Variant class: CCND1 amplification

Other identifiers: 17-343, NCI-2017-02359

Population segments: First line, Stage III, Stage IV

Phase: II

Therapy: abemaciclib

Location: United States

US State: MA

Contact: Dr. Geoffrey Shapiro [617-632-4942; geoffrey_shapiro@dfci.harvard.edu]

NCT04116541
MegaMOST - A Multicenter, Open-label, Biology Driven, Phase II Study Evaluating the Activity of Anti-cancer Treatments Targeting Tumor Molecular Alterations / Characteristics in Advanced / Metastatic Tumors.

Cancer type: Unspecified Solid Tumor

Variant class: CCND1 amplification

Other inclusion criteria: RB1 wild type, TP53 wild type

Other identifiers: ET19-073, ET19-073 (MegaMOST), EudraCT Number: 2019-001494-88, MegaMOST

Population segments: ALK, Second line, Stage III, Stage IV

Phase: II

Therapies: siremadlin, ribociclib

Location: France

NCT04557449
A Phase I/IB Study Evaluating The Safety, Tolerability, Pharamcokinetics, Pharmacodynamics, And Anti-Tumor Activity Of PF-07220060 As A Single Agent And as Part of Combination Therapy In Participants With Advanced Solid Tumors

Cancer type: Unspecified Solid Tumor

Variant class: CCND1 amplification

Other identifiers: C4391001, CDK4, EudraCT Number:2020-002938-33, NCI-2020-10085

Population segments: Adenocarcinoma, Estrogen receptor positive, First line, HER2 negative, HER2 positive, Progesterone receptor positive, Second line, Stage III, Stage IV, Third line, Untreated

Phase: I

Therapy: PF-07220060

Location: United States

US States: CT, MA, MI, TN, TX

Contact: Pfizer CT.gov Call Center [800-718-1021; ClinicalTrials.gov_Inquiries@pfizer.com]

CCND1 amplification (continued)

NCT03297606
Canadian Profiling and Targeted Agent Utilization Trial (CAPTUR): A Phase II Basket Trial

Cancer type: Unspecified Solid Tumor

Variant class: CCND1 aberration

Other identifiers: CA209-9DL, CAPTUR, ESR-17-12831, ML39800, PM1, WI233446

Population segments: Aggressive, Diffuse large B-cell lymphoma (DLBCL), Extranodal marginal zone B-cell lymphoma (MALT), First line, Follicular lymphoma (FL), Indolent, Lymphoblastic lymphoma (LBL), Mantle cell lymphoma (MCL), Other subtype, Second line, Stage III, Stage IV, Waldenstrom's macroglobulinemia (WM)

Phase: II

Therapy: palbociclib

Location: Canada

NCT03155620
NCI-COG Pediatric MATCH (Molecular Analysis for Therapy Choice) Screening Protocol

Cancer type: Unspecified Solid Tumor

Variant class: G1/S cell cycle pathway

Other inclusion criteria: RB1 positive

Other identifiers: 17-729, 2017-0625, 20170841, APEC1621SC, COGAPEC1621, COGAPEC1621SC, N 55017 SC, NCI-2017-01251, NCI-COG Pediatric MATCH, Pediatric MATCH

Population segments: ALK, Aggressive, BRAF, FGFR, HRAS, Indolent, KRAS, NRAS, Pediatric or Adolescent, Second line, Stage III, Stage IV

Phase: II

Therapy: palbociclib

Locations: Puerto Rico, United States

US States: AK, AL, AR, AZ, CA, CO, CT, DC, DE, FL, GA, HI, IA, ID, IL, IN, KY, LA, MA, MD, ME, MI, MN, MO, MS, NC, NE, NH, NJ, NV, NY, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VA, VT, WA, WI

Contact: Multiple contacts: See www.clinicaltrials.gov for complete list of contacts.

NCT04851119
A Phase I/II Study of Tegavivint (NSC#826393) in Children, Adolescents, and Young Adults With Recurrent or Refractory Solid Tumors, Including Lymphomas and Desmoid Tumors

Cancer type: Unspecified Solid Tumor

Variant class: WNT pathway

Other identifiers: NCI-2021-02852, PEPN2011

Population segments: (N/A), Aggressive, Classical, Indolent, Nodular lymphocyte-predominant, Second line

Phase: I/II

Therapy: tegatrabetan

Location: United States

US States: AL, CA, CO, DC, IL, IN, MA, MI, MN, MO, NY, OH, PA, TN, TX, WA

Contact: Multiple contacts: See www.clinicaltrials.gov for complete list of contacts.

FGF19 amplification

No NCT ID - see other identifier(s)
Phase I Clinical Study Of BPI-43487 In Patients With Advanced Solid Tumors

Cancer type: Unspecified Solid Tumor

Variant class: FGF19 amplification

Other identifiers: BTP-661111, CTR20210565

Population segments: FGFR, Second line, Stage III, Stage IV

Phase: I

Therapy: BPI-43487

Location: China

NCT05372120
A Phase II Clinical Trial to Evaluate the Efficacy and Safety of ICP-192 in Treated Patients With Advanced Solid Tumors With FGF/FGFR Gene Alterations

Cancer type: Unspecified Solid Tumor

Variant class: FGF aberration

Other identifiers: CTR20212797, ICP-CL-00304

Population segments: FGFR, Second line, Stage III, Stage IV

Phase: II

Therapy: ICP-192

Location: China

No NCT ID - see other identifier(s)
A Phase Ib Study to Assess the Safety, Tolerability, and Efficacy of TAS-120 (Futibatinib) in Combination with MK-3475 (Pembrolizumab) in Patients with Solid Tumors.

Cancer type: Unspecified Solid Tumor

Variant class: FGF aberration

Other identifier: JapicCTI-195063

Population segments: FGFR, Line of therapy N/A, Stage III, Stage IV

Phase: I

Therapies: futibatinib, pembrolizumab

Location: Japan

FGF3 amplification

NCT05372120
A Phase II Clinical Trial to Evaluate the Efficacy and Safety of ICP-192 in Treated Patients With Advanced Solid Tumors With FGF/FGFR Gene Alterations

Cancer type: Unspecified Solid Tumor

Variant class: FGF aberration

Other identifiers: CTR20212797, ICP-CL-00304

Population segments: FGFR, Second line, Stage III, Stage IV

Phase: II

Therapy: ICP-192

Location: China

FGF3 amplification (continued)

No NCT ID - see other identifier(s)
A Phase Ib Study to Assess the Safety, Tolerability, and Efficacy of TAS-120 (Futibatinib) in Combination with MK-3475 (Pembrolizumab) in Patients with Solid Tumors.

Cancer type: Unspecified Solid Tumor

Variant class: FGF aberration

Other identifier: JapicCTI-195063

Population segments: FGFR, Line of therapy N/A, Stage III, Stage IV

Phase: I

Therapies: futibatinib, pembrolizumab

Location: Japan

Clinical Trials Summary

BRCA1 K654Sfs*47 + BRCA2 K862Sfs*17 + CHEK1 I471Vfs*17

NCT ID	Title	Phase
NCT03025035	Open Label, Phase II Pilot Study of Immune Checkpoint Inhibition With Pembrolizumab in Combination With PARP Inhibition With Olaparib in Advanced BRCA-mutated or HDR-defect Breast Cancers	II
NCT04826341	A Phase I/II Study of Sacituzumab Govitecan Plus Berzosertib in Small Cell Lung Cancer and Homologous Recombination-Deficient Cancers Resistant to PARP Inhibitors	I/II

PIK3CA H1047R

NCT ID	Title	Phase
NCT05038735	EPIK-B5: A Phase III, Randomized, Double-blind, Placebo-controlled Study of Alpelisib in Combination With Fulvestrant for Men and Postmenopausal Women With HR-positive, HER2-negative Advanced Breast Cancer With a PIK3CA Mutation, Who Progressed on or After Aromatase Inhibitor and a CDK4/6 Inhibitor	III
No NCT ID	BCT 1901 (CAPTURE): A Phase II Randomised Study To Evaluate Alpelisib Plus Fulvestrant Versus Capecitabine In Oestrogen Receptor Positive, HER2-Negative Advanced Breast Cancer Patients With PIK3CA Mutant Circulating DNA.	II
NCT05307705	A Study of LOXO-783 Administered as Monotherapy and in Combination With Anticancer Therapies for Patients With Advanced Breast Cancer and Other Solid Tumors With a PIK3CA H1047R Mutation	I
NCT04586335	Open Label, Phase Ib Study to Evaluate the Safety, Tolerability, Pharmacokinetics and Clinical Activity of CYH33, an Oral a-specific PI3K Inhibitor in Combination With Olaparib, an Oral PARP Inhibitor in Patients With Advanced Solid Tumors.	I
NCT05216432	A First-in-Human Study of Mutant-selective PI3Ka Inhibitor, RLY-2608, as a Single Agent in Advanced Solid Tumor Patients and in Combination With Fulvestrant in Patients With Advanced Breast Cancer	I
NCT05025735	Alpelisib, Fulvestrant and Dapagliflozin for the Treatment of HR+, HER2 -, PIK3CA Mutant Metastatic Breast Cancer	II
NCT04191499	A Phase III, Randomized, Double-Blind, Placebo-Controlled Study Evaluating the Efficacy and Safety of GDC-0077 Plus Palbociclib and Fulvestrant Versus Placebo Plus Palbociclib and Fulvestrant in Patients With PIK3CA-Mutant, Hormone Receptor-Positive, Her2-Negative, Locally Advanced or Metastatic Breast Cancer	II/III

Clinical Trials Summary (continued)

PIK3CA H1047R (continued)

NCT ID	Title	Phase
NCT04524000	A Phase II Open-label, 2-Part, Multi-center Study of BYL719 (Alpelisib) in Combination With Fulvestrant for Men and Postmenopausal Women With PIK3CA Mutation Hormone Receptor (HR) Positive, HER2-negative, Advanced Breast Cancer Which Progressed on or After Aromatase Inhibitor (AI) Treatment in Japan	II
NCT04544189	A Phase II Randomized Double-blind, Placebo-controlled Study of Alpelisib in Combination With Fulvestrant for Chinese Men and Postmenopausal Women With Hormone Receptor Positive, HER2-negative, PIK3CA Mutant Advanced Breast Cancer Which Progressed on or After Aromatase Inhibitor (AI) Treatment, Including a Subset With Pharmacokinetic Analysis	II
NCT04762979	A Phase II, Single Arm, Non-randomized Study of Alpelisib (BYL719) in Combination With Continued Endocrine Therapy Following Progression on Endocrine Therapy in Hormone Receptor Positive, HER2 Negative, PIK3CA Mutant Metastatic Breast Cancer	II
NCT04862143	Open-label, Multicenter, Pilot-trial Evaluating the Safety and Utility of a Hybrid Decentralized Clinical Trial (DCT) Approach Using a TELEmedicine Platform in Patients With HR-positive/HER2-negative Advanced Breast Cancer With a PIK3CA Mutation Treated With Alpelisib - Fulvestrant TELEPIK Trial	II
NCT04899349	EPIK-B4: A Phase II, Multicenter, Randomized, Open-label, Active-controlled Study to Assess the Safety and Efficacy of Dapagliflozin + Metformin XR Versus Metformin During Treatment With Alpelisib (BYL719) in Combination With Fulvestrant in Participants With HR+, HER2-, Advanced Breast Cancer With a PIK3CA Mutation Following Progression on/After Endocrine-based Therapy.	II
NCT03284957	A Phase I/II Study for the Safety, Efficacy, Pharmacokinetic and Pharmacodynamics Evaluation of SAR439859, Administered Orally as Monotherapy, Then in Combination With Other Anti-cancer Therapies in Postmenopausal Women With Estrogen Receptor-positive Advanced Breast Cancer (AMEERA-1).	I/II
NCT04856371	A Multicenter, Open-label, Phase Ib Study to Evaluate the Safety, Tolerability, Pharmacokinetics and Preliminary Efficacy of CYH33 in Combination With Endocrine Therapy With or Without Palbociclib in Patients With PIK3CA Mutant, HR+, HER2- Advanced Breast Cancer.	I
NCT04188548	EMBER: A Phase Ia/Ib Study of LY3484356 Administered as Monotherapy and in Combination With Anticancer Therapies for Patients With ER+ Locally Advanced or Metastatic Breast Cancer and Other Select Non-Breast Cancers	I
NCT03006172	A Phase I, Open-Label, Dose-Escalation Study Evaluating the Safety, Tolerability, and Pharmacokinetics of Inavolisib as a Single Agent in Patients With Locally Advanced or Metastatic PIK3CA-Mutant Solid Tumors and in Combination With Endocrine and Targeted Therapies in Patients With Locally Advanced or Metastatic PIK3CA-Mutant Breast Cancer	I
NCT05331326	A Multicenter, Single Arm Phase II Clinical Study Evaluating the Efficacy and Safety of RC48-ADC for the Treatment of HER2-expression Metastatic Breast Cancer With Abnormal Activation of PAM Pathway	II
NCT04355858	Precision Treatment of Luminal Advanced Breast Cancer Based on Molecular Subtyping	II
NCT04591431	The Rome Trial From Histology to Target: the Road to Personalize Target Therapy and Immunotherapy	II
NCT04215003	This is a Phase Ib/II, Prospective , Open-label, Single Center, Bayesian Adaptive Design, Umbrella Study Evaluating the Efficacy and Safety of Neo-adjuvant Therapy in Patients With Breast Cancer	I/II
NCT04317105	A Phase I/II Biomarker Driven Combination Trial of Copanlisib and Immune Checkpoint Inhibitors in Patients With Advanced Solid Tumors	I/II

Clinical Trials Summary (continued)

PIK3CA H1047R (continued)

NCT ID	Title	Phase
NCT04551521	Continuous ReAssessment With Flexible ExTension in Rare Malignancies - CRAFT: The NCT-PMO-1602 Phase II Trial	II
NCT04632992	MyTACTIC: An Open-Label Phase II Study Evaluating Targeted Therapies in Patients Who Have Advanced Solid Tumors With Genomic Alterations or Protein Expression Patterns Predictive of Response	II
NCT03673787	Ice-CAP: A Phase I Trial of Ipatasertib in Combination With Atezolizumab in Patients With Advanced Solid Tumours With PI3K Pathway Hyperactivation.	I/II
NCT05300048	A Phase 1b Study of Serabelisib in Combination With an Insulin Suppressing Diet (Study ISD) in Subjects With Advanced Solid Tumors With PIK3CA Mutations With or Without PTEN Loss	I
NCT04344795	Phase 1a/1b Open Label Dose-escalation and Expansion Study of TPST-1495 as a Single Agent and in Combination With Pembrolizumab in Subjects With Solid Tumors	I
NCT03239015	Efficacy and Safety of Precision Therapy in Refractory Tumor (Long March Pathway)	II
NCT04589845	Tumor-Agnostic Precision Immunooncology and Somatic Targeting Rational for You (TAPISTRY) Phase II Platform Trial	II
No NCT ID	A Clinical Trial To Evaluate The Safety And Preliminary Efficacy Of WXFL10030390 Tablets On PIK3CA Advanced Solid Tumors	I/II
NCT03842228	A Phase Ib Biomarker-Driven Combination Trial of Copanlisib, Olaparib, and Durvalumab (MEDI4736) in Patients With Advanced Solid Tumors	I
No NCT ID	A Phase Ib, open-label, dose-escalation and dose-expansion study evaluating the safety, tolerability, pharmacokinetics, and preliminary antitumor activity of inavolisib in combination with paclitaxel and with or without targeted therapies in patients with locally advanced or metastatic solid tumors	I
NCT03065062	Phase I Study of the CDK4/6 Inhibitor Palbociclib (PD-0332991) in Combination With the PI3K/mTOR Inhibitor Gedatolisib (PF-05212384) for Patients With Advanced Squamous Cell Lung, Pancreatic, Head & Neck and Other Solid Tumors	I
NCT04192981	A Phase I Study With Expansion Cohort of Concurrent GDC-0084 With Radiation Therapy for Patients With Solid Tumor Brain Metastases or Leptomeningeal Metastases Harboring PI3K Pathway Mutations	I
NCT03297606	Canadian Profiling and Targeted Agent Utilization Trial (CAPTUR): A Phase II Basket Trial	II
NCT03213678	NCI-COG Pediatric MATCH (Molecular Analysis for Therapy Choice)- Phase II Subprotocol of LY3023414 in Patients With Solid Tumors	II
NCT04958226	An Open-label, Fixed-sequence Study to Assess the Effect of Repeated Doses of Capivasertib on the Pharmacokinetics of Oral Midazolam (a CYP450 3A Probe) in Patients With Advanced Solid Tumours Harbouring Alterations in the PI3K/AKT/PTEN Pathway	I

Clinical Trials Summary (continued)

BRCA1 K654Sfs*47

NCT ID	Title	Phase
NCT04053322	An International Multicenter Phase II Trial of Durvalumab (MEDI4736) Plus OLAparib Plus Fulvestrant in Metastatic or Locally Advanced ER-positive, HER2-negative Breast Cancer Patients Selected Using Criteria That Predict Sensitivity to Olaparib	II
NCT03344965	A Phase II Study of Olaparib Monotherapy in Metastatic Breast Cancer Patients With Germline or Somatic Mutations in DNA Repair Genes (Olaparib Expanded)	II
NCT03742895	A Phase II Study of Olaparib Monotherapy in Participants With Previously Treated, Homologous Recombination Repair Mutation (HRRm) or Homologous Recombination Deficiency (HRD) Positive Advanced Cancer	II
NCT05340413	Predicting Olaparib Sensitivity in Patients With Unresectable Locally Advanced/Metastatic HER2-negative Breast Cancer With BRCA1, BRCA2, PALB2, RAD51C or RAD51D Mutations or RAD51-foci Low Test: RADIOLA TRIAL	II
NCT03990896	Evaluation of Talazoparib, a PARP Inhibitor, in Patients With Somatic BRCA Mutant Metastatic Breast Cancer: Genotyping Based Clinical Trial.	II
NCT04892693	Talazoparib in Advanced Breast Cancer Patients With Homologous Recombinant Deficiency: A Phase II Clinical and Exploratory Biomarker Study of Talazoparib	II
NCT03685331	Harnessing Olaparib, Palbociclib and Endocrine Therapy: A Phase I/II Trial of Olaparib, Palbociclib and Fulvestrant in Patients With BRCA Mutation-associated, Hormone Receptor-positive, Human Epidermal Growth Factor Receptor 2 (HER2)-Negative Metastatic Breast Cancer (HOPE).	I/II
NCT03964532	TALAVE: A Pilot Trial of Induction Talazoparib Followed by Combination of Talazoparib and Avelumab in Advanced Breast Cancer	I/II
NCT04586335	Open Label, Phase Ib Study to Evaluate the Safety, Tolerability, Pharmacokinetics and Clinical Activity of CYH33, an Oral a-specific PI3K Inhibitor in Combination With Olaparib, an Oral PARP Inhibitor in Patients With Advanced Solid Tumors.	I
NCT04673448	Phase IB Trial of Niraparib and TSR-042 in Patients With BRCA-Mutated Breast, Pancreas or Ovary Cancer	I
NCT04915755	A Randomized Phase III Double-Blinded Study Comparing the Efficacy and Safety of Niraparib to Placebo in Participants With Either HER2-Negative BRCA-Mutated or Triple-Negative Breast Cancer With Molecular Disease Based on Presence of Circulating Tumor DNA After Definitive Therapy (ZEST)	III
NCT05085626	An Open, Single-center, Cohort Clinical Study of Fluzoparib in Combination With Chidamide or Camrelizumab for HRD Positive and HER2-negative Advanced Breast Cancer	II
NCT04644289	Window-of-opportunity Proof-of-concept, Non-randomized, Open-label Phase II Trial of Olaparib Given Alone (Cohort A) or in Combination With Durvalumab (Cohort B) Prior to Primary Debulking Surgery in Histologically Proven High-grade Epithelial Ovarian Cancer (EOC)	II
NCT04711824	Phase I/II Study of Stereotactic Radiosurgery with Concurrent Administration of DNA Damage Response (DDR) Inhibitor (Olaparib) Followed by Adjuvant Combination of Durvalumab (MEDI4736) and Physician's Choice Systemic Therapy in Subjects with Breast Cancer Brain Metastases	I/II
NCT02264678	A Modular Phase I, Open-Label, Multicentre Study to Assess the Safety, Tolerability, Pharmacokinetics and Preliminary Anti-tumour Activity of Ceralasertib in Combination With Cytotoxic Chemotherapy and/or DNA Damage Repair/Novel Anti-cancer Agents in Patients With Advanced Solid Malignancies.	I

Clinical Trials Summary (continued)

BRCA1 K654Sfs*47 (continued)

NCT ID	Title	Phase
NCT04169841	Precision Medicine Phase II Study Evaluating the Efficacy of a Double Immunotherapy by Durvalumab and Tremelimumab Combined With Olaparib in Patients With Solid Cancers and Carriers of Homologous Recombination Repair Genes Mutation in Response or Stable After Olaparib Treatment	II
NCT05002868	A Multi-center, Open-label, Phase I/Ib Study to Assess the Safety, Pharmacokinetics and Anti-tumor Activity of RP12146, a Poly (ADP-ribose) Polymerase (PARP) Inhibitor, in Patients With Locally Advanced or Metastatic Solid Tumors	I
NCT04095273	A Multicenter, Non-randomized, Open-label Phase 1b Study to Determine the Maximum Tolerated and Recommended Phase 2 Dose of the ATR Inhibitor Elimusertib in Combination With Pembrolizumab and to Characterize Its Safety, Tolerability, Pharmacokinetics and Preliminary Anti-tumor Activity in Participants With Advanced Solid Tumors	I
NCT02810743	Substantially Improving the Cure Rate of High-risk BRCA1-like Breast Cancer Patients With Personalized Therapy (SUBITO) - an International Randomized Phase III Trial	III
NCT04240106	Multicenter,Open-label,Phase II Clinical Trial to Evaluate the Efficacy and Safety of Niraparib + Aromatase Inhibitors for(HR)+/(HER2)-, MBC With Either Germline BRCA-mutated or Germinal BRCA-wildtype and Homologous Recombination Deficiency	II
No NCT ID	Phase II Clinical Trial of the PARP Inhibitor, Olaparib, in HR-Deficient Metastatic Breast and Relapsed Ovarian Cancer in Patients Without Germline Mutations in BRCA1 and BRCA2: The EMBRACE study	II
NCT05261269	A Dose-escalation Study of the Safety and Pharmacology of DAN-222 in Subjects With Metastatic Breast Cancer	I
NCT04992013	Genomically Guided Phase II Study to Evaluate the Clinical Benefit of Niraparib in Tumors Metastatic to the CNS	II
NCT02029001	A Two-period, Multicenter, Randomized, Open-label, Phase II Study Evaluating the Clinical Benefit of a Maintenance Treatment Targeting Tumor Molecular Alterations in Patients with Progressive Locally-advanced or Metastatic Solid Tumors.	II
NCT03967938	Efficacy of Olaparib in Advanced Cancers Occurring in Patients With Germline Mutations or Somatic Tumor Mutations in Homologous Recombination Genes	II
NCT02693535	Targeted Agent and Profiling Utilization Registry (TAPUR) Study	II
NCT04985721	An Open Label, Signal Seeking, Translational, Phase II Trial of Pamiparib in Combination With Tislelizumab in Patients With Advanced Tumours With Homologous Recombination Repair Defects	II
NCT04550494	A Pharmacodynamics-Driven Trial of Talazoparib, an Oral PARP Inhibitor, in Patients With Advanced Solid Tumors and Aberrations in Genes Involved in DNA Damage Response	II
NCT05071209	A Phase I/II Study of BAY 1895344 (Elimusertib, NSC#810486) in Pediatric Patients With Relapsed or Refractory Solid Tumors	I/II
NCT02595931	Phase I Clinical Trial of M6620 (VX-970, Berzosertib) in Combination With the Topoisomerase I Inhibitor Irinotecan in Patients With Advanced Solid Tumors.	I
NCT05038839	A Phase I Study of Cabozantinib and Pamiparib to Evaluate Triple Inhibition of PARP, VEGFR and c-MET in Advanced Homologous Recombination Deficient Malignancies	I
NCT03842228	A Phase Ib Biomarker-Driven Combination Trial of Copanlisib, Olaparib, and Durvalumab (MEDI4736) in Patients With Advanced Solid Tumors	I

Clinical Trials Summary (continued)

BRCA1 K654Sfs*47 (continued)

NCT ID	Title	Phase
NCT03415659	A Phase I, Open-label, Single-center, Single/Multiple-dose, Dose-escalation/Dose-expansion Clinical Study on Tolerance and Pharmacokinetics of HWH340 Tablet in Patients With Advanced Solid Tumors	I
NCT03297606	Canadian Profiling and Targeted Agent Utilization Trial (CAPTUR): A Phase II Basket Trial	II
NCT04174716	An Open-label, Multi-center, Phase Ib/IIa Basket Trial of IDX-1197 in Patients With Homologous Recombination Repair Mutated Solid Tumors	I/II
NCT03767075	Basket of Baskets: A Modular, Open-label, Phase II, Multicentre Study To Evaluate Targeted Agents in Molecularly Selected Populations With Advanced Solid Tumours	II
NCT04423185	Platform Study of Genotyping Guided Precision Medicine for Rare Tumors in China	II
NCT04267939	An Open-label Phase Ib Study to Determine the Maximum Tolerated and/or Recommended Phase II Dose of the ATR Inhibitor BAY 1895344 in Combination With PARP Inhibitor Niraparib, in Patients With Recurrent Advanced Solid Tumors and Ovarian Cancer	I
NCT04693468	Modular Phase IB Hypothesis-Testing, Biomarker-Driven, Talazoparib Combination Trial (TalaCom)	I

BRCA2 K862Sfs*17

NCT ID	Title	Phase
NCT04053322	An International Multicenter Phase II Trial of Durvalumab (MEDI4736) Plus OLAparib Plus Fulvestrant in Metastatic or Locally Advanced ER-positive, HER2-negative Breast Cancer Patients Selected Using Criteria That Predict Sensitivity to Olaparib	II
NCT03344965	A Phase II Study of Olaparib Monotherapy in Metastatic Breast Cancer Patients With Germline or Somatic Mutations in DNA Repair Genes (Olaparib Expanded)	II
NCT03742895	A Phase II Study of Olaparib Monotherapy in Participants With Previously Treated, Homologous Recombination Repair Mutation (HRRm) or Homologous Recombination Deficiency (HRD) Positive Advanced Cancer	II
NCT05340413	Predicting Olaparib Sensitivity in Patients With Unresectable Locally Advanced/Metastatic HER2-negative Breast Cancer With BRCA1, BRCA2, PALB2, RAD51C or RAD51D Mutations or RAD51-foci Low Test: RADIOLA TRIAL	II
NCT03990896	Evaluation of Talazoparib, a PARP Inhibitor, in Patients With Somatic BRCA Mutant Metastatic Breast Cancer: Genotyping Based Clinical Trial.	II
NCT04892693	Talazoparib in Advanced Breast Cancer Patients With Homologous Recombinant Deficiency: A Phase II Clinical and Exploratory Biomarker Study of Talazoparib	II
NCT03685331	Harnessing Olaparib, Palbociclib and Endocrine Therapy: A Phase I/II Trial of Olaparib, Palbociclib and Fulvestrant in Patients With BRCA Mutation-associated, Hormone Receptor-positive, Human Epidermal Growth Factor Receptor 2 (HER2)-Negative Metastatic Breast Cancer (HOPE).	I/II
NCT03964532	TALAVE: A Pilot Trial of Induction Talazoparib Followed by Combination of Talazoparib and Avelumab in Advanced Breast Cancer	I/II

Clinical Trials Summary (continued)

BRCA2 K862Sfs*17 (continued)

NCT ID	Title	Phase
NCT04586335	Open Label, Phase Ib Study to Evaluate the Safety, Tolerability, Pharmacokinetics and Clinical Activity of CYH33, an Oral a-specific PI3K Inhibitor in Combination With Olaparib, an Oral PARP Inhibitor in Patients With Advanced Solid Tumors.	I
NCT04673448	Phase IB Trial of Niraparib and TSR-042 in Patients With BRCA-Mutated Breast, Pancreas or Ovary Cancer	I
NCT04915755	A Randomized Phase III Double-Blinded Study Comparing the Efficacy and Safety of Niraparib to Placebo in Participants With Either HER2-Negative BRCA-Mutated or Triple-Negative Breast Cancer With Molecular Disease Based on Presence of Circulating Tumor DNA After Definitive Therapy (ZEST)	III
NCT05085626	An Open, Single-center, Cohort Clinical Study of Fluzoparib in Combination With Chidamide or Camrelizumab for HRD Positive and HER2-negative Advanced Breast Cancer	II
NCT04644289	Window-of-opportunity Proof-of-concept, Non-randomized, Open-label Phase II Trial of Olaparib Given Alone (Cohort A) or in Combination With Durvalumab (Cohort B) Prior to Primary Debulking Surgery in Histologically Proven High-grade Epithelial Ovarian Cancer (EOC)	II
NCT04711824	Phase I/II Study of Stereotactic Radiosurgery with Concurrent Administration of DNA Damage Response (DDR) Inhibitor (Olaparib) Followed by Adjuvant Combination of Durvalumab (MEDI4736) and Physician's Choice Systemic Therapy in Subjects with Breast Cancer Brain Metastases	I/II
NCT02264678	A Modular Phase I, Open-Label, Multicentre Study to Assess the Safety, Tolerability, Pharmacokinetics and Preliminary Anti-tumour Activity of Ceralasertib in Combination With Cytotoxic Chemotherapy and/or DNA Damage Repair/Novel Anti-cancer Agents in Patients With Advanced Solid Malignancies.	I
NCT04169841	Precision Medicine Phase II Study Evaluating the Efficacy of a Double Immunotherapy by Durvalumab and Tremelimumab Combined With Olaparib in Patients With Solid Cancers and Carriers of Homologous Recombination Repair Genes Mutation in Response or Stable After Olaparib Treatment	II
NCT05002868	A Multi-center, Open-label, Phase I/Ib Study to Assess the Safety, Pharmacokinetics and Anti-tumor Activity of RP12146, a Poly (ADP-ribose) Polymerase (PARP) Inhibitor, in Patients With Locally Advanced or Metastatic Solid Tumors	I
NCT04095273	A Multicenter, Non-randomized, Open-label Phase 1b Study to Determine the Maximum Tolerated and Recommended Phase 2 Dose of the ATR Inhibitor Elimusertib in Combination With Pembrolizumab and to Characterize Its Safety, Tolerability, Pharmacokinetics and Preliminary Anti-tumor Activity in Participants With Advanced Solid Tumors	I
NCT02810743	Substantially Improving the Cure Rate of High-risk BRCA1-like Breast Cancer Patients With Personalized Therapy (SUBITO) - an International Randomized Phase III Trial	III
NCT04240106	Multicenter,Open-label,Phase II Clinical Trial to Evaluate the Efficacy and Safety of Niraparib + Aromatase Inhibitors for(HR)+/(HER2)-, MBC With Either Germline BRCA-mutated or Germinal BRCA-wildtype and Homologous Recombination Deficiency	II
No NCT ID	Phase II Clinical Trial of the PARP Inhibitor, Olaparib, in HR-Deficient Metastatic Breast and Relapsed Ovarian Cancer in Patients Without Germline Mutations in BRCA1 and BRCA2: The EMBRACE study	II
NCT05261269	A Dose-escalation Study of the Safety and Pharmacology of DAN-222 in Subjects With Metastatic Breast Cancer	I
NCT04992013	Genomically Guided Phase II Study to Evaluate the Clinical Benefit of Niraparib in Tumors Metastatic to the CNS	II

Clinical Trials Summary (continued)

BRCA2 K862Sfs*17 (continued)

NCT ID	Title	Phase
NCT02029001	A Two-period, Multicenter, Randomized, Open-label, Phase II Study Evaluating the Clinical Benefit of a Maintenance Treatment Targeting Tumor Molecular Alterations in Patients with Progressive Locally-advanced or Metastatic Solid Tumors.	II
NCT03967938	Efficacy of Olaparib in Advanced Cancers Occurring in Patients With Germline Mutations or Somatic Tumor Mutations in Homologous Recombination Genes	II
NCT02693535	Targeted Agent and Profiling Utilization Registry (TAPUR) Study	II
NCT04985721	An Open Label, Signal Seeking, Translational, Phase II Trial of Pamiparib in Combination With Tislelizumab in Patients With Advanced Tumours With Homologous Recombination Repair Defects	II
NCT04550494	A Pharmacodynamics-Driven Trial of Talazoparib, an Oral PARP Inhibitor, in Patients With Advanced Solid Tumors and Aberrations in Genes Involved in DNA Damage Response	II
NCT05071209	A Phase I/II Study of BAY 1895344 (Elimusertib, NSC#810486) in Pediatric Patients With Relapsed or Refractory Solid Tumors	I/II
NCT02595931	Phase I Clinical Trial of M6620 (VX-970, Berzosertib) in Combination With the Topoisomerase I Inhibitor Irinotecan in Patients With Advanced Solid Tumors.	I
NCT05038839	A Phase I Study of Cabozantinib and Pamiparib to Evaluate Triple Inhibition of PARP, VEGFR and c-MET in Advanced Homologous Recombination Deficient Malignancies	I
NCT03842228	A Phase Ib Biomarker-Driven Combination Trial of Copanlisib, Olaparib, and Durvalumab (MEDI4736) in Patients With Advanced Solid Tumors	I
NCT03415659	A Phase I, Open-label, Single-center, Single/Multiple-dose, Dose-escalation/Dose-expansion Clinical Study on Tolerance and Pharmacokinetics of HWH340 Tablet in Patients With Advanced Solid Tumors	I
NCT03297606	Canadian Profiling and Targeted Agent Utilization Trial (CAPTUR): A Phase II Basket Trial	II
NCT04174716	An Open-label, Multi-center, Phase Ib/IIa Basket Trial of IDX-1197 in Patients With Homologous Recombination Repair Mutated Solid Tumors	I/II
NCT03767075	Basket of Baskets: A Modular, Open-label, Phase II, Multicentre Study To Evaluate Targeted Agents in Molecularly Selected Populations With Advanced Solid Tumours	II
NCT04423185	Platform Study of Genotyping Guided Precision Medicine for Rare Tumors in China	II
NCT04267939	An Open-label Phase Ib Study to Determine the Maximum Tolerated and/or Recommended Phase II Dose of the ATR Inhibitor BAY 1895344 in Combination With PARP Inhibitor Niraparib, in Patients With Recurrent Advanced Solid Tumors and Ovarian Cancer	I
NCT04693468	Modular Phase IB Hypothesis-Testing, Biomarker-Driven, Talazoparib Combination Trial (TalaCom)	I

CHEK1 I471Vfs*17

NCT ID	Title	Phase
NCT04053322	An International Multicenter Phase II Trial of Durvalumab (MEDI4736) Plus OLAparib Plus Fulvestrant in Metastatic or Locally Advanced ER-positive, HER2-negative Breast Cancer Patients Selected Using Criteria That Predict Sensitivity to Olaparib	II

Clinical Trials Summary (continued)

CHEK1 I471Vfs*17 (continued)

NCT ID	Title	Phase
NCT04892693	Talazoparib in Advanced Breast Cancer Patients With Homologous Recombinant Deficiency: A Phase II Clinical and Exploratory Biomarker Study of Talazoparib	II
NCT04586335	Open Label, Phase Ib Study to Evaluate the Safety, Tolerability, Pharmacokinetics and Clinical Activity of CYH33, an Oral a-specific PI3K Inhibitor in Combination With Olaparib, an Oral PARP Inhibitor in Patients With Advanced Solid Tumors.	I
NCT04169841	Precision Medicine Phase II Study Evaluating the Efficacy of a Double Immunotherapy by Durvalumab and Tremelimumab Combined With Olaparib in Patients With Solid Cancers and Carriers of Homologous Recombination Repair Genes Mutation in Response or Stable After Olaparib Treatment	II
NCT05002868	A Multi-center, Open-label, Phase I/Ib Study to Assess the Safety, Pharmacokinetics and Anti-tumor Activity of RP12146, a Poly (ADP-ribose) Polymerase (PARP) Inhibitor, in Patients With Locally Advanced or Metastatic Solid Tumors	I
NCT03344965	A Phase II Study of Olaparib Monotherapy in Metastatic Breast Cancer Patients With Germline or Somatic Mutations in DNA Repair Genes (Olaparib Expanded)	II
NCT04095273	A Multicenter, Non-randomized, Open-label Phase 1b Study to Determine the Maximum Tolerated and Recommended Phase 2 Dose of the ATR Inhibitor Elimusertib in Combination With Pembrolizumab and to Characterize Its Safety, Tolerability, Pharmacokinetics and Preliminary Anti-tumor Activity in Participants With Advanced Solid Tumors	I
NCT02810743	Substantially Improving the Cure Rate of High-risk BRCA1-like Breast Cancer Patients With Personalized Therapy (SUBITO) - an International Randomized Phase III Trial	III
NCT05085626	An Open, Single-center, Cohort Clinical Study of Fluzoparib in Combination With Chidamide or Camrelizumab for HRD Positive and HER2-negative Advanced Breast Cancer	II
NCT04240106	Multicenter,Open-label,Phase II Clinical Trial to Evaluate the Efficacy and Safety of Niraparib + Aromatase Inhibitors for(HR)+/(HER2)-, MBC With Either Germline BRCA-mutated or Germinal BRCA-wildtype and Homologous Recombination Deficiency	II
No NCT ID	Phase II Clinical Trial of the PARP Inhibitor, Olaparib, in HR-Deficient Metastatic Breast and Relapsed Ovarian Cancer in Patients Without Germline Mutations in BRCA1 and BRCA2: The EMBRACE study	II
NCT05261269	A Dose-escalation Study of the Safety and Pharmacology of DAN-222 in Subjects With Metastatic Breast Cancer	I
NCT04550494	A Pharmacodynamics-Driven Trial of Talazoparib, an Oral PARP Inhibitor, in Patients With Advanced Solid Tumors and Aberrations in Genes Involved in DNA Damage Response	II
NCT03742895	A Phase II Study of Olaparib Monotherapy in Participants With Previously Treated, Homologous Recombination Repair Mutation (HRRm) or Homologous Recombination Deficiency (HRD) Positive Advanced Cancer	II
NCT03967938	Efficacy of Olaparib in Advanced Cancers Occurring in Patients With Germline Mutations or Somatic Tumor Mutations in Homologous Recombination Genes	II
NCT04985721	An Open Label, Signal Seeking, Translational, Phase II Trial of Pamiparib in Combination With Tislelizumab in Patients With Advanced Tumours With Homologous Recombination Repair Defects	II
NCT05071209	A Phase I/II Study of BAY 1895344 (Elimusertib, NSC#810486) in Pediatric Patients With Relapsed or Refractory Solid Tumors	I/II

Clinical Trials Summary (continued)

CHEK1 I471Vfs*17 (continued)

NCT ID	Title	Phase
NCT05038839	A Phase I Study of Cabozantinib and Pamiparib to Evaluate Triple Inhibition of PARP, VEGFR and c-MET in Advanced Homologous Recombination Deficient Malignancies	I
NCT03842228	A Phase Ib Biomarker-Driven Combination Trial of Copanlisib, Olaparib, and Durvalumab (MEDI4736) in Patients With Advanced Solid Tumors	I
NCT02029001	A Two-period, Multicenter, Randomized, Open-label, Phase II Study Evaluating the Clinical Benefit of a Maintenance Treatment Targeting Tumor Molecular Alterations in Patients with Progressive Locally-advanced or Metastatic Solid Tumors.	II
NCT04174716	An Open-label, Multi-center, Phase Ib/IIa Basket Trial of IDX-1197 in Patients With Homologous Recombination Repair Mutated Solid Tumors	I/II
NCT03767075	Basket of Baskets: A Modular, Open-label, Phase II, Multicentre Study To Evaluate Targeted Agents in Molecularly Selected Populations With Advanced Solid Tumours	II
NCT04423185	Platform Study of Genotyping Guided Precision Medicine for Rare Tumors in China	II
NCT04992013	Genomically Guided Phase II Study to Evaluate the Clinical Benefit of Niraparib in Tumors Metastatic to the CNS	II
NCT03297606	Canadian Profiling and Targeted Agent Utilization Trial (CAPTUR): A Phase II Basket Trial	II
NCT02595931	Phase I Clinical Trial of M6620 (VX-970, Berzosertib) in Combination With the Topoisomerase I Inhibitor Irinotecan in Patients With Advanced Solid Tumors.	I
NCT04267939	An Open-label Phase Ib Study to Determine the Maximum Tolerated and/or Recommended Phase II Dose of the ATR Inhibitor BAY 1895344 in Combination With PARP Inhibitor Niraparib, in Patients With Recurrent Advanced Solid Tumors and Ovarian Cancer	I
NCT04693468	Modular Phase IB Hypothesis-Testing, Biomarker-Driven, Talazoparib Combination Trial (TalaCom)	I

ERBB2 I655V

NCT ID	Title	Phase
NCT04579380	A Phase II Basket Study of Tucatinib in Combination With Trastuzumab in Subjects With Previously Treated, Locally Advanced Unresectable or Metastatic Solid Tumors Driven by HER2 Alterations	II
No NCT ID	Single Arm, Open Label, Signal Seeking, Phase IIa Trial Of The Activity Of Trastuzumab Emtansine (T-DM1) In Patients With Tumours Harbouring HER2 Amplifications Or Mutations	II
NCT04355858	Precision Treatment of Luminal Advanced Breast Cancer Based on Molecular Subtyping	II
NCT04591431	The Rome Trial From Histology to Target: the Road to Personalize Target Therapy and Immunotherapy	II
NCT04040699	A Phase Ib Study to Evaluate Efficacy, Safety and Tolerability of KN026 Combined With KN046 in Subjects With HER2 Positive Solid Tumor.	I
NCT05013554	A Phase I/Ib Open-label, First-in-human, Single Agent, Dose Escalation and Expansion Study for the Evaluation of Safety, Pharmacokinetics, Pharmacodynamics, and Anti-tumor Activity of SAR443216 in Participants with Relapsed/Refractory HER2 Expressing Solid Tumors.	I

Clinical Trials Summary (continued)

ERBB2 I655V (continued)

NCT ID	Title	Phase
NCT03202316	A Phase II Study of Triple Combination of Atezolizumab + Cobimetinib + Eribulin (ACE) in Patients With Recurrent/Metastatic Inflammatory Breast Cancer	II
NCT04215003	This is a Phase Ib/II, Prospective , Open-label, Single Center, Bayesian Adaptive Design, Umbrella Study Evaluating the Efficacy and Safety of Neo-adjuvant Therapy in Patients With Breast Cancer	I/II
NCT04551521	Continuous ReAssessment With Flexible ExTension in Rare Malignancies - CRAFT: The NCT-PMO-1602 Phase II Trial	II
NCT03255070	A Phase I, Multicenter, Open-label, Multiple Dose-escalation and Expansion Study of ARX788, as Monotherapy in Advanced Solid Tumors With HER2 Expression	I
NCT04589845	Tumor-Agnostic Precision Immunooncology and Somatic Targeting Rational for You (TAPISTRY) Phase II Platform Trial	II
NCT04632992	MyTACTIC: An Open-Label Phase II Study Evaluating Targeted Therapies in Patients Who Have Advanced Solid Tumors With Genomic Alterations or Protein Expression Patterns Predictive of Response	II
NCT03810872	An Open Explorative Phase II, Open Label Study of Afatinib in the Treatment of Advanced Cancer Carrying an EGFR, a HER2 or a HER3 Mutation	II
NCT02693535	Targeted Agent and Profiling Utilization Registry (TAPUR) Study	II
NCT04423185	Platform Study of Genotyping Guided Precision Medicine for Rare Tumors in China	II
NCT05315700	A Phase Ib/II, Single agent, Tumor-Agnostic Trial of ORIC-114 in Patients With Advanced Solid Tumors With EGFR or HER2 Exon 20 Alterations or HER2 Amplification And Will allow Patients With CNS Metastases that are Either Treated or Untreated But Asymptomatic.	I/II
NCT04886804	An Open Label, Phase I Dose Escalation Trial, With Dose Confirmation and Expansion, of BI 1810631 as Monotherapy in Patients With Advanced or Metastatic Solid Tumors With HER2 Aberrations	I
NCT03065387	Phase I Study of the Pan-ERBB Inhibitor Neratinib Given in Combination With Everolimus, Palbociclib, or Trametinib in Advanced Cancer Subjects With EGFR Mutation/Amplification, HER2 Mutation/ Amplification, or HER3/4 Mutation or KRAS Mutation	I
NCT04446260	A Phase I Multi-Country, Multi-Center, Open-Label Study to Evaluate the Safety, Tolerability, Pharmacokinetics and Efficacy of SHR-A1811 in HER2 Expressing or Mutated Advanced Malignant Solid Tumor Subjects	I
NCT03297606	Canadian Profiling and Targeted Agent Utilization Trial (CAPTUR): A Phase II Basket Trial	II
NCT04982926	A Phase I Study of TAS2940 in Patients With Locally Advanced or Metastatic Solid Tumors With EGFR and / or HER2 Aberrations	I

FGFR4 G388R

NCT ID	Title	Phase
NCT04936295	A Phase II Study of the Efficacy and Tolerability of Fulvestrant Plus Anlotinib in HR(+)/HER2(-) Metastatic Breast Cancer Patients With FGFR Mutation	II

Clinical Trials Summary (continued)

FGFR4 G388R (continued)

NCT ID	Title	Phase
NCT04572295	An Open-label Phase Ib Study of E7090 Monotherapy and in Combination With Other Anticancer Agents in Subjects With ER+, HER2- Recurrent/Metastatic Breast Cancer	I
NCT04504331	A Phase IB Study of Infigratinib in Combination With Tamoxifen in Hormone Receptor Positive, HER2 Negative, FGFR Altered Advanced Breast Cancer	I
NCT04233567	A Phase II Study of Oral Infigratinib in Adult Patients With Advanced or Metastatic Solid Tumors With FGFR1-3 Gene Fusions or Other FGFR Genetic Alterations	II
NCT02272998	Phase II Study Of Ponatinib For Advanced Cancers With Genomic Alterations In Fibroblastic Growth Factor Receptor (FGFR) And Other Genomic Targets (KIT, Pdgfra, RET FLT3, ABL1)	II
NCT04083976	A Phase II Study of Erdafitinib in Subjects With Advanced Solid Tumors and FGFR Gene Alterations.	II
NCT03929965	Anlotinib in Advanced Solid Tumors With FGFR Alteration	I
NCT05372120	A Phase II Clinical Trial to Evaluate the Efficacy and Safety of ICP-192 in Treated Patients With Advanced Solid Tumors With FGF/FGFR Gene Alterations	II
NCT04565275	A Multi-center Open-label, Phase I/II Clinical Trial to Evaluate the Safety, Tolerability, Pharmacokinetics, and Pharmacodynamics of ICP-192 in Patients With Advanced Solid Tumors and FGFR Gene Alterations.	I/II
No NCT ID	Phase I Clinical Study of BPI-17509 In Patients With Advanced Solid Tumors	I
No NCT ID	An Open-label, Multicenter, Phase I Clinical Study to Evaluate the Safety, Efficacy, and Pharmacokinetic/ Pharmacodynamic Characteristics of FH-2001 Capsules in Patients with Advanced Solid Tumors.	I
No NCT ID	A Phase Ib Study to Assess the Safety, Tolerability, and Efficacy of TAS-120 (Futibatinib) in Combination with MK-3475 (Pembrolizumab) in Patients with Solid Tumors.	I

TSC2 c.482-3C>T

NCT ID	Title	Phase
NCT05331326	A Multicenter, Single Arm Phase II Clinical Study Evaluating the Efficacy and Safety of RC48-ADC for the Treatment of HER2-expression Metastatic Breast Cancer With Abnormal Activation of PAM Pathway	II
NCT04355858	Precision Treatment of Luminal Advanced Breast Cancer Based on Molecular Subtyping	II
NCT04215003	This is a Phase Ib/II, Prospective , Open-label, Single Center, Bayesian Adaptive Design, Umbrella Study Evaluating the Efficacy and Safety of Neo-adjuvant Therapy in Patients With Breast Cancer	I/II
NCT04185831	MEGALiT - a Multicenter, Basket and Umbrella Explorative Trial on the Efficacy and Safety of Molecular Profile Selected Commercially Available Targeted Anti-cancer Drugs in Patients With Advanced Cancers Progressive on Standard Therapy	II
NCT03213678	NCI-COG Pediatric MATCH (Molecular Analysis for Therapy Choice)- Phase II Subprotocol of LY3023414 in Patients With Solid Tumors	II
NCT02693535	Targeted Agent and Profiling Utilization Registry (TAPUR) Study	II
NCT05103358	A Phase II Multi-center Open-label Basket Trial of ABI-009 (Nab Sirolimus) for Adult and Adolescent Patients With Solid Tumors Harboring Pathogenic Inactivating Alterations in TSC1 or TSC2 Genes	II

Clinical Trials Summary (continued)

TSC2 c.482-3C>T (continued)

NCT ID	Title	Phase
NCT03297606	Canadian Profiling and Targeted Agent Utilization Trial (CAPTUR): A Phase II Basket Trial	II
NCT04551521	Continuous ReAssessment With Flexible ExTension in Rare Malignancies - CRAFT: The NCT-PMO-1602 Phase II Trial	II
NCT03673787	Ice-CAP: A Phase I Trial of Ipatasertib in Combination With Atezolizumab in Patients With Advanced Solid Tumours With PI3K Pathway Hyperactivation.	I/II
NCT04958226	An Open-label, Fixed-sequence Study to Assess the Effect of Repeated Doses of Capivasertib on the Pharmacokinetics of Oral Midazolam (a CYP450 3A Probe) in Patients With Advanced Solid Tumours Harbouring Alterations in the PI3K/AKT/PTEN Pathway	I

PMS2 K541Efs*3

NCT ID	Title	Phase
NCT03344965	A Phase II Study of Olaparib Monotherapy in Metastatic Breast Cancer Patients With Germline or Somatic Mutations in DNA Repair Genes (Olaparib Expanded)	II
NCT04095273	A Multicenter, Non-randomized, Open-label Phase 1b Study to Determine the Maximum Tolerated and Recommended Phase 2 Dose of the ATR Inhibitor Elimusertib in Combination With Pembrolizumab and to Characterize Its Safety, Tolerability, Pharmacokinetics and Preliminary Anti-tumor Activity in Participants With Advanced Solid Tumors	I
NCT05002868	A Multi-center, Open-label, Phase I/Ib Study to Assess the Safety, Pharmacokinetics and Anti-tumor Activity of RP12146, a Poly (ADP-ribose) Polymerase (PARP) Inhibitor, in Patients With Locally Advanced or Metastatic Solid Tumors	I
NCT03767075	Basket of Baskets: A Modular, Open-label, Phase II, Multicentre Study To Evaluate Targeted Agents in Molecularly Selected Populations With Advanced Solid Tumours	II
NCT02693535	Targeted Agent and Profiling Utilization Registry (TAPUR) Study	II
NCT04500548	3CI Study: Childhood Cancer Combination Immunotherapy. Phase Ib and Expansion Study of Nivolumab Combination Immunotherapy in Children, Adolescent, and Young Adult (CAYA) Patients With Relapsed/ Refractory Hypermutant Cancers	I
NCT04992013	Genomically Guided Phase II Study to Evaluate the Clinical Benefit of Niraparib in Tumors Metastatic to the CNS	II
NCT02595931	Phase I Clinical Trial of M6620 (VX-970, Berzosertib) in Combination With the Topoisomerase I Inhibitor Irinotecan in Patients With Advanced Solid Tumors.	I
NCT04267939	An Open-label Phase Ib Study to Determine the Maximum Tolerated and/or Recommended Phase II Dose of the ATR Inhibitor BAY 1895344 in Combination With PARP Inhibitor Niraparib, in Patients With Recurrent Advanced Solid Tumors and Ovarian Cancer	I
NCT04693468	Modular Phase IB Hypothesis-Testing, Biomarker-Driven, Talazoparib Combination Trial (TalaCom)	I

Clinical Trials Summary (continued)

CCND1 amplification

NCT ID	Title	Phase
NCT03310879	A Phase II Study of the CDK4/6 Inhibitor Abemaciclib in Patients With Solid Tumors Harboring Genetic Alterations in Genes Encoding D-type Cyclins or Amplification of CDK4 or CDK6	II
NCT04116541	MegaMOST - A Multicenter, Open-label, Biology Driven, Phase II Study Evaluating the Activity of Anti-cancer Treatments Targeting Tumor Molecular Alterations /Characteristics in Advanced / Metastatic Tumors.	II
NCT04557449	A Phase I/IB Study Evaluating The Safety, Tolerability, Pharamcokinetics, Pharmacodynamics, And Anti-Tumor Activity Of PF-07220060 As A Single Agent And as Part of Combination Therapy In Participants With Advanced Solid Tumors	I
NCT03297606	Canadian Profiling and Targeted Agent Utilization Trial (CAPTUR): A Phase II Basket Trial	II
NCT03155620	NCI-COG Pediatric MATCH (Molecular Analysis for Therapy Choice) Screening Protocol	II
NCT04851119	A Phase I/II Study of Tegavivint (NSC#826393) in Children, Adolescents, and Young Adults With Recurrent or Refractory Solid Tumors, Including Lymphomas and Desmoid Tumors	I/II

FGF19 amplification

NCT ID	Title	Phase
No NCT ID	Phase I Clinical Study Of BPI-43487 In Patients With Advanced Solid Tumors	I
NCT05372120	A Phase II Clinical Trial to Evaluate the Efficacy and Safety of ICP-192 in Treated Patients With Advanced Solid Tumors With FGF/FGFR Gene Alterations	II
No NCT ID	A Phase Ib Study to Assess the Safety, Tolerability, and Efficacy of TAS-120 (Futibatinib) in Combination with MK-3475 (Pembrolizumab) in Patients with Solid Tumors.	I

FGF3 amplification

NCT ID	Title	Phase
NCT05372120	A Phase II Clinical Trial to Evaluate the Efficacy and Safety of ICP-192 in Treated Patients With Advanced Solid Tumors With FGF/FGFR Gene Alterations	II
No NCT ID	A Phase Ib Study to Assess the Safety, Tolerability, and Efficacy of TAS-120 (Futibatinib) in Combination with MK-3475 (Pembrolizumab) in Patients with Solid Tumors.	I

Genes Assayed

Genes Assayed for the Detection of DNA Sequence Variants

AKT1, AKT2, AKT3, ALK, AR, ARAF, AXL, BRAF, BTK, CBL, CCND1, CDK4, CDK6, CHEK2, CSF1R, CTNNB1, DDR2, EGFR, ERBB2, ERBB3, ERBB4, ERCC2, ESR1, EZH2, FGFR1, FGFR2, FGFR3, FGFR4, FLT3, FOXL2, GATA2, GNA11, GNAQ, GNAS, H3F3A, HIST1H3B, HNF1A, HRAS, IDH1, IDH2, JAK1, JAK2, JAK3, KDR, KIT, KNSTRN, KRAS, MAGOH, MAP2K1, MAP2K2, MAP2K4, MAPK1, MAX, MDM4, MED12,

Genes Assayed (continued)

Genes Assayed for the Detection of DNA Sequence Variants (continued)

MET, MTOR, MYC, MYCN, MYD88, NFE2L2, NRAS, NTRK1, NTRK2, NTRK3, PDGFRA, PDGFRB, PIK3CA, PIK3CB, PPP2R1A, PTPN11, RAC1, RAF1, RET, RHEB, RHOA, ROS1, SF3B1, SMAD4, SMO, SPOP, SRC, STAT3, TERT, TOP1, U2AF1, XPO1

Genes Assayed for the Detection of Copy Number Variations

AKT1, AKT2, AKT3, ALK, AR, AXL, BRAF, CCND1, CCND2, CCND3, CCNE1, CDK2, CDK4, CDK6, EGFR, ERBB2, ESR1, FGF19, FGF3, FGFR1, FGFR2, FGFR3, FGFR4, FLT3, IGF1R, KIT, KRAS, MDM2, MDM4, MET, MYC, MYCL, MYCN, NTRK1, NTRK2, NTRK3, PDGFRA, PDGFRB, PIK3CA, PIK3CB, PPARG, RICTOR, TERT

Genes Assayed for the Detection of Fusions

AKT2, ALK, AR, AXL, BRAF, BRCA1, BRCA2, CDKN2A, EGFR, ERBB2, ERBB4, ERG, ESR1, ETV1, ETV4, ETV5, FGFR1, FGFR2, FGFR3, FGR, FLT3, JAK2, KRAS, MDM4, MET, MYB, MYBL1, NF1, NOTCH1, NOTCH4, NRG1, NTRK1, NTRK2, NTRK3, NUTM1, PDGFRA, PDGFRB, PIK3CA, PPARG, PRKACA, PRKACB, PTEN, RAD51B, RAF1, RB1, RELA, RET, ROS1, RSPO2, RSPO3, TERT

Genes Assayed with Full Exon Coverage

ARID1A, ATM, ATR, ATRX, BAP1, BRCA1, BRCA2, CDK12, CDKN1B, CDKN2A, CDKN2B, CHEK1, CREBBP, FANCA, FANCD2, FANCI, FBXW7, MLH1, MRE11, MSH2, MSH6, NBN, NF1, NF2, NOTCH1, NOTCH2, NOTCH3, PALB2, PIK3R1, PMS2, POLE, PTCH1, PTEN, RAD50, RAD51, RAD51B, RAD51C, RAD51D, RB1, RNF43, SETD2, SLX4, SMARCA4, SMARCB1, STK11, TP53, TSC1, TSC2

Thermo Fisher Scientific's Ion Torrent Oncomine Reporter software was used in generation of this report. Software was developed and designed internally by Thermo Fisher Scientific. The analysis was based on Oncomine Reporter (5.5.1 data version 2022.07(002)). The data presented here is from a curated knowledgebase of publicly available information, but may not be exhaustive. FDA information was sourced from www.fda.gov and is current as of 2022-06-15. NCCN information was sourced from www.nccn.org and is current as of 2022-06-01. EMA information was sourced from www.ema.europa.eu/ema and is current as of 2022-06-15. ESMO information was sourced from www.esmo.org and is current as of 2022-06-01. Clinical Trials information is current as of 2022-06-01. For the most up-to-date information regarding a particular trial, search www.clinicaltrials.gov by NCT ID or search local clinical trials authority website by local identifier listed in 'Other identifiers.' Variants are reported according to HGVS nomenclature and classified following AMP/ASCO/CAP guidelines (Li et al. 2017). Based on the data sources selected, variants, therapies, and trials listed in this report are listed in order of potential clinical significance but not for predicted efficacy of the therapies.

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Metastasis Related Information

The prevalence of the key variants detected, shown as number and percent of patients being diagnosed with metastasis, metastasis at the Central Nervous System (CNS), metastasis at Pleura, metastasis at Skin, metastasis at Bone, metastasis at Liver, metastasis at Lymph Node (LN), and metastasis at Lung are shown below. The number in the parentheses indicates the total number of patients in the corresponding group. The data is collected from a recent pan cancer study.[1]

Prevalence in patients diagnosed with Metastatic positive (961 patients) and Metastatic negative (600 patients).

Gene	Met.(#)	Met.(%)	Not Met.(#)	Not Met.(%)
PIK3CA	351	36.52	266	44.33
CCND1	179	18.63	74	12.33
FGF19	161	16.75	67	11.17
FGF3	152	15.82	65	10.83
ERBB2	132	13.74	67	11.17
BRCA2	30	3.12	14	2.33
BRCA1	13	1.35	9	1.50
TSC2	10	1.04	7	1.17
FGFR4	8	0.83	5	0.83
PMS2	7	0.73	0	0.00

Prevalence in patients diagnosed with Distant CNS positive (152 patients) and Distant CNS negative (1409 patients).

Gene	Met.(#)	Met.(%)	Not Met.(#)	Not Met.(%)
PIK3CA	50	32.89	567	40.24
CCND1	34	22.37	219	15.54
ERBB2	29	19.08	170	12.07
FGF19	29	19.08	199	14.12
FGF3	24	15.79	193	13.70
BRCA2	5	3.29	39	2.77
PMS2	2	1.32	5	0.35
BRCA1	2	1.32	20	1.42
FGFR4	1	0.66	12	0.85
TSC2	0	0.00	17	1.21

Prevalence in patients diagnosed with Distant Pleura positive (121 patients) and Distant Pleura negative (1440 patients).

Gene	Met.(#)	Met.(%)	Not Met.(#)	Not Met.(%)
PIK3CA	39	32.23	578	40.14
CCND1	25	20.66	228	15.83
FGF19	21	17.36	207	14.38
FGF3	17	14.05	200	13.89
ERBB2	14	11.57	185	12.85
TSC2	3	2.48	14	0.97
BRCA1	3	2.48	19	1.32
PMS2	1	0.83	6	0.42
FGFR4	1	0.83	12	0.83
BRCA2	0	0.00	44	3.06

Prevalence in patients diagnosed with Distant Skin positive (186 patients) and Distant Skin negative (1375 patients).

Gene	Met.(#)	Met.(%)	Not Met.(#)	Not Met.(%)
PIK3CA	65	34.95	552	40.15
CCND1	34	18.28	219	15.93
FGF19	32	17.20	196	14.25
FGF3	30	16.13	187	13.60
ERBB2	29	15.59	170	12.36
BRCA2	7	3.76	37	2.69
FGFR4	3	1.61	10	0.73
TSC2	3	1.61	14	1.02
PMS2	2	1.08	5	0.36
BRCA1	1	0.54	21	1.53

Prevalence in patients diagnosed with Distant Bone positive (508 patients) and Distant Bone negative (1053 patients).

Gene	Met.(#)	Met.(%)	Not Met.(#)	Not Met.(%)
PIK3CA	189	37.20	428	40.65
CCND1	110	21.65	143	13.58
FGF19	96	18.90	132	12.54
FGF3	86	16.93	131	12.44
ERBB2	70	13.78	129	12.25
BRCA2	18	3.54	26	2.47
FGFR4	8	1.57	5	0.47
TSC2	6	1.18	11	1.04
PMS2	5	0.98	2	0.19
BRCA1	5	0.98	17	1.61

Prevalence in patients diagnosed with Distant Liver positive (323 patients) and Distant Liver negative (1238 patients).

Gene	Met.(#)	Met.(%)	Not Met.(#)	Not Met.(%)
PIK3CA	115	35.60	502	40.55
CCND1	76	23.53	177	14.30
FGF19	65	20.12	163	13.17
FGF3	56	17.34	161	13.00
ERBB2	42	13.00	157	12.68
BRCA2	11	3.41	33	2.67
FGFR4	4	1.24	9	0.73
TSC2	4	1.24	13	1.05
BRCA1	2	0.62	20	1.62
PMS2	2	0.62	5	0.40

Prevalence in patients diagnosed with Distant LN positive (313 patients) and Distant LN negative (1248 patients).

Gene	Met.(#)	Met.(%)	Not Met.(#)	Not Met.(%)
PIK3CA	115	36.74	502	40.22
CCND1	57	18.21	196	15.71
FGF19	51	16.29	177	14.18
FGF3	47	15.02	170	13.62
ERBB2	45	14.38	154	12.34
BRCA2	15	4.79	29	2.32
TSC2	6	1.92	11	0.88
BRCA1	3	0.96	19	1.52
FGFR4	3	0.96	10	0.80
PMS2	1	0.32	6	0.48

Prevalence in patients diagnosed with Distant Lung positive (201 patients) and Distant Lung negative (1360 patients).

Gene	Met.(#)	Met.(%)	Not Met.(#)	Not Met.(%)
PIK3CA	73	36.32	544	40.00
CCND1	38	18.91	215	15.81
ERBB2	36	17.91	163	11.99
FGF19	32	15.92	196	14.41
FGF3	28	13.93	189	13.90
BRCA2	7	3.48	37	2.72
TSC2	4	1.99	13	0.96
FGFR4	3	1.49	10	0.74
BRCA1	1	0.50	21	1.54
PMS2	0	0.00	7	0.51

Pathways

Our Oncomine Comprehensive Assay v3 has a good kinase domain coverage to span the entire kinase domain in several critical receptor tyrosine kinases. The panel also has good coverage of MAPK, PI3K, DNA repair and cell cycle pathway genes. The detected genes are mappered to the KEGG[2] TP53, PI3K, MAPK, Cell cycle, Ras, Homologous Recombination, DNA mismatch repair and Cancer pathways, as shown below.

TP53 Pathway

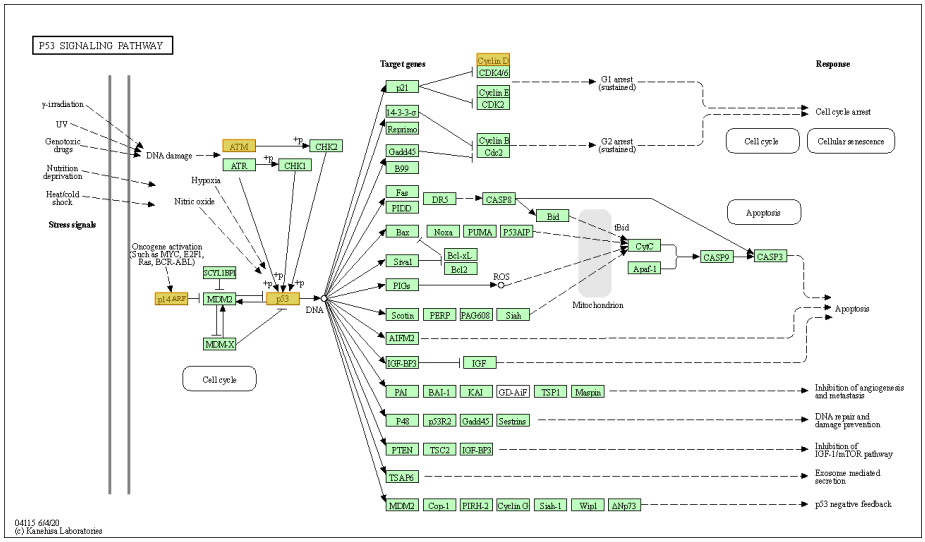

Figure 1: TP53 pathway, the detected genes are highlighted in yellow.

PI3K Pathway

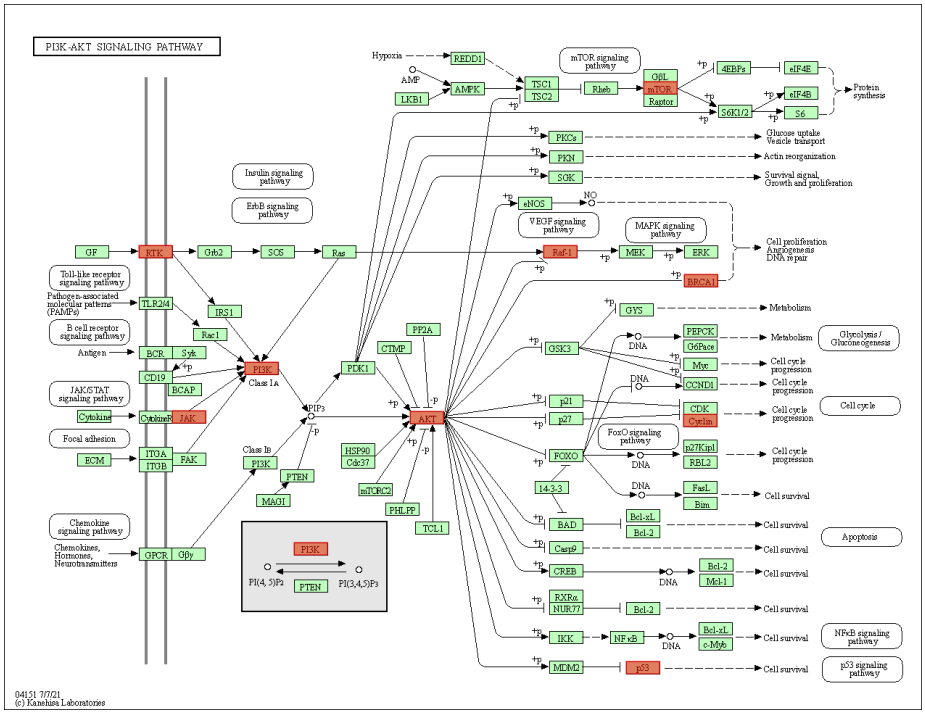

Figure 2: PI3K pathway, the detected genes are highlighted in red.

MAPK Pathway

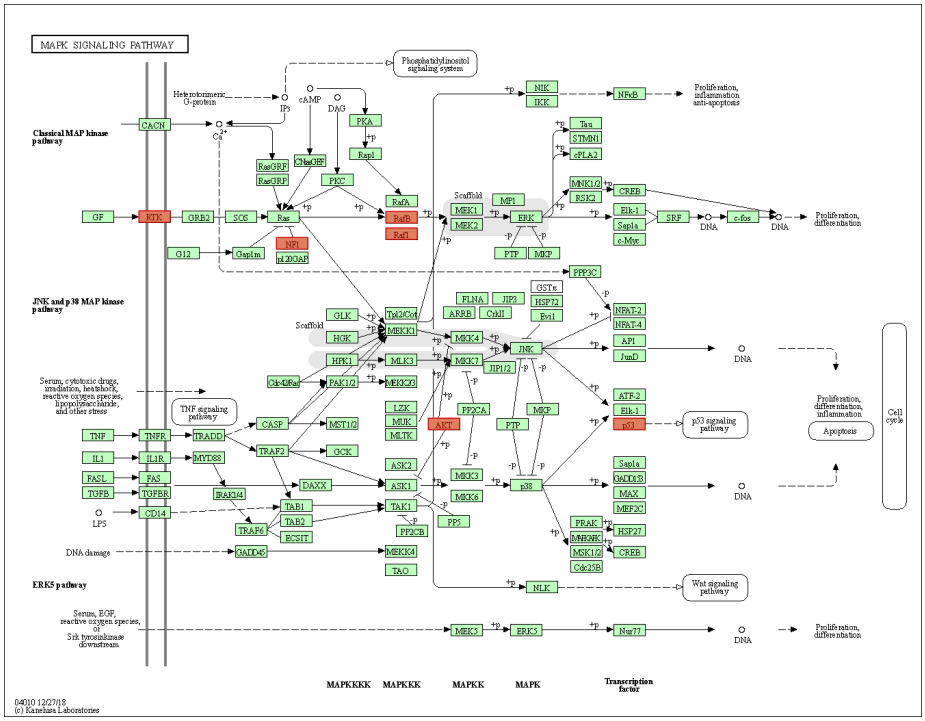

Figure 3: MAPK pathway, the detected genes are highlighted in red.

Cell Cycle Pathway

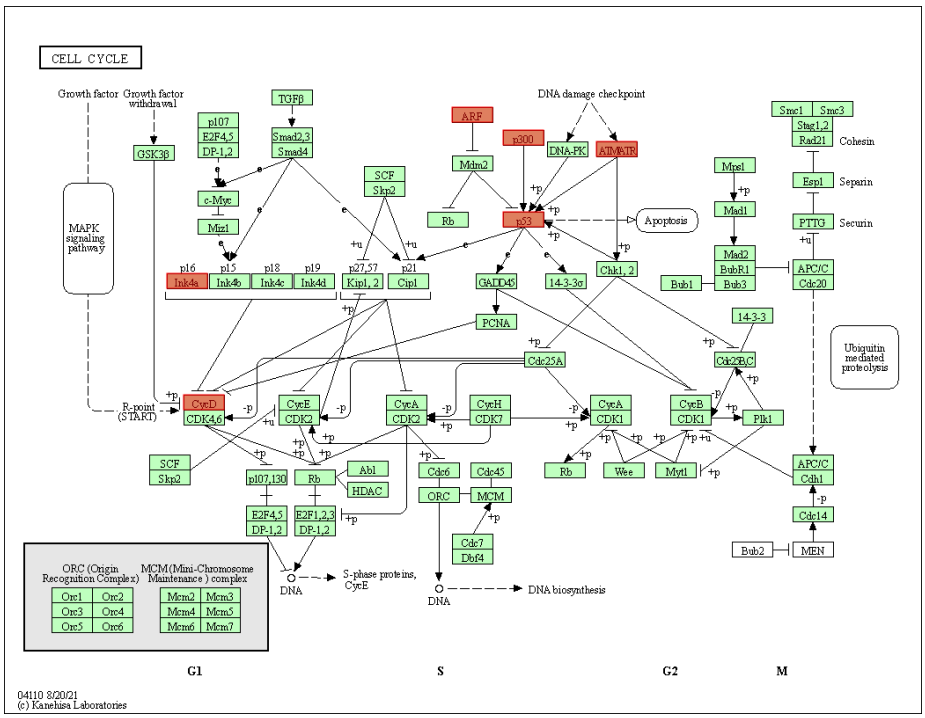

Figure 4: Cell Cycle pathway, the detected genes are highlighted in red.

Ras Pathway

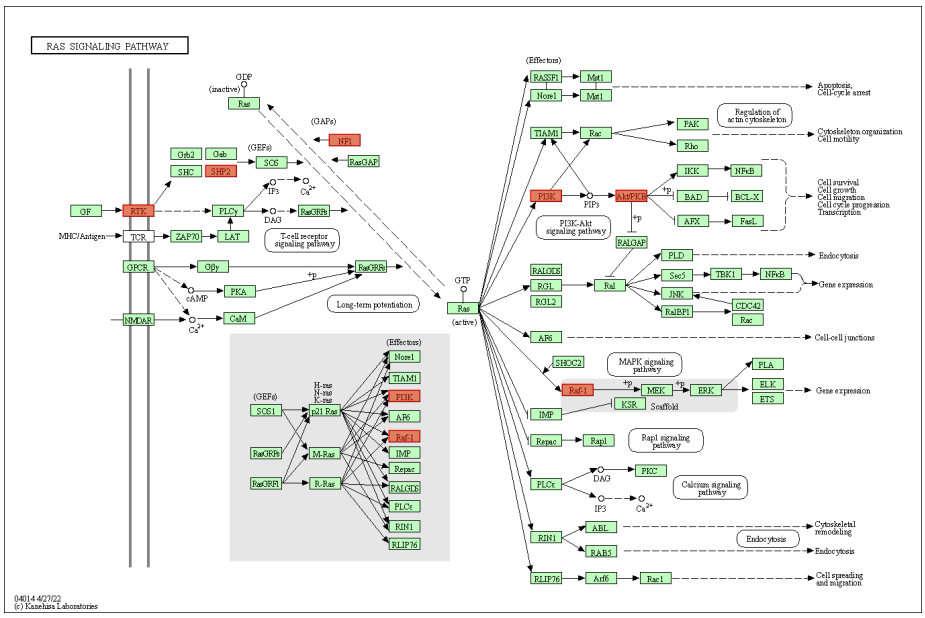

Figure 5: Ras pathway, the detected genes are highlighted in red.

Homologous Recombination Pathway

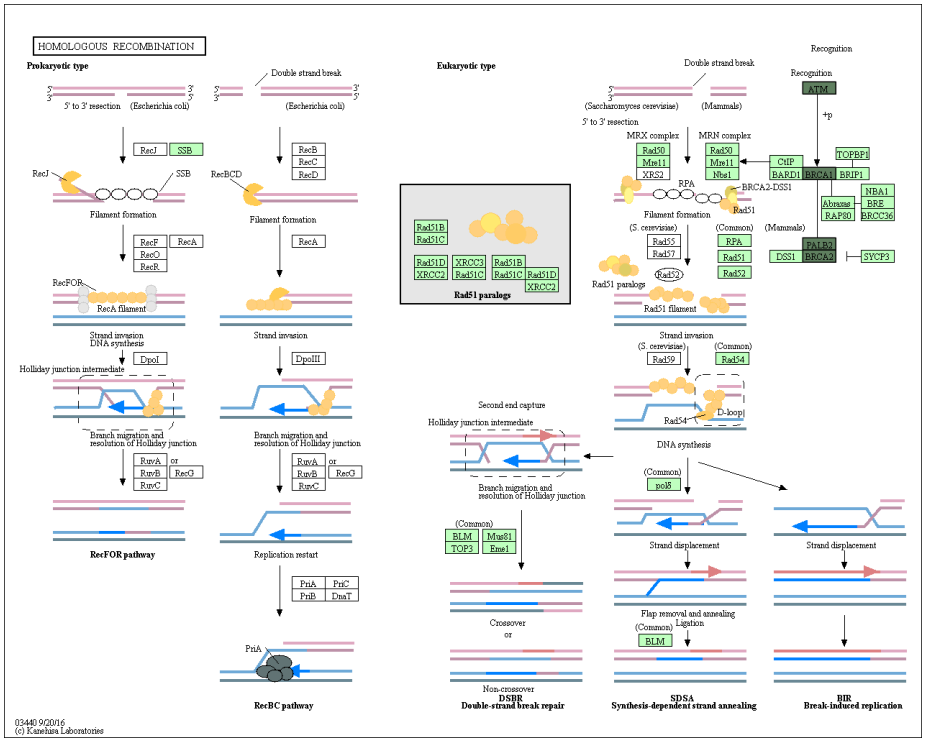

Figure 6: Homologous recombination pathway, the detected genes are highlighted in grey.

DNA Mismatch Repair Pathway

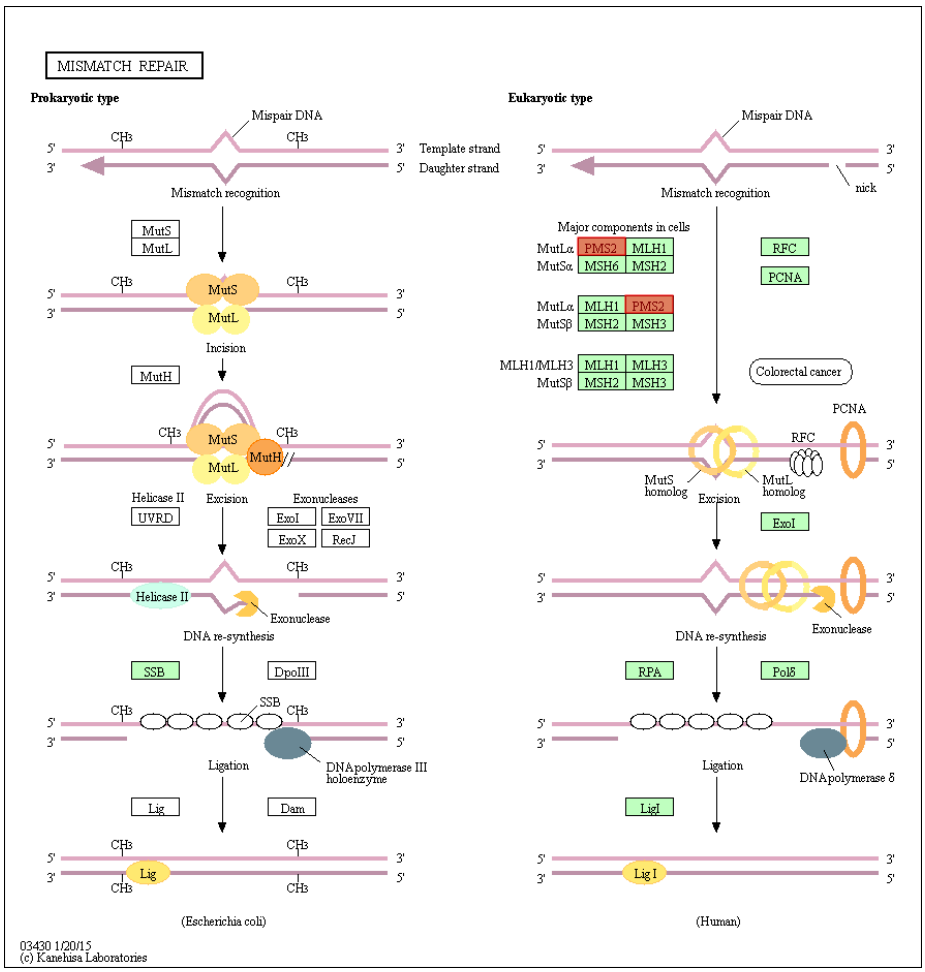

Figure 7: DNA mismatch repair pathway, the detected genes are highlighted in red.

Cancer Pathway

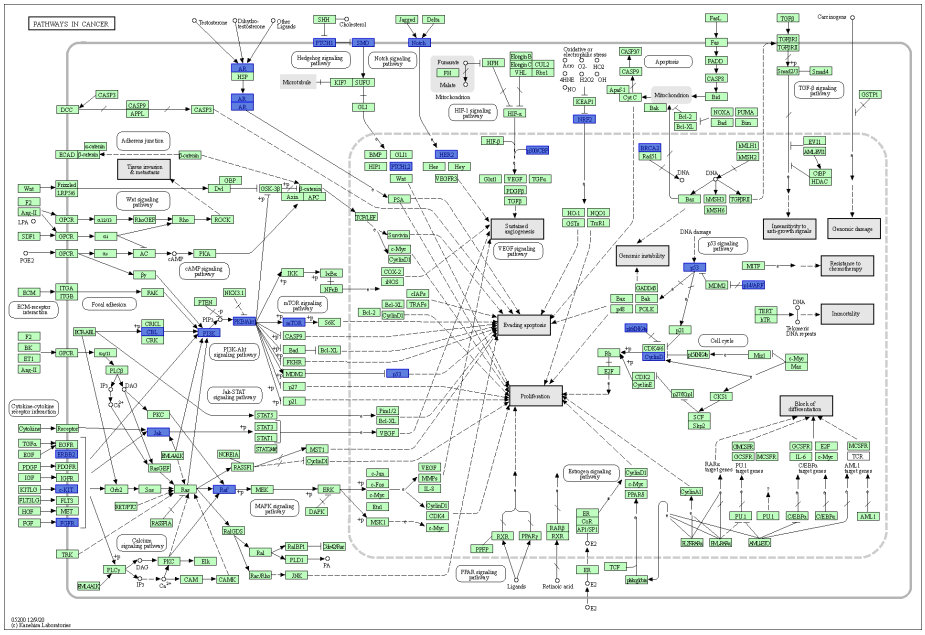

Figure 8: Cancer pathway, the detected genes are highlighted in blue.

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