

Solid Tumor Drug Updates

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Disclosures

I have nothing to disclose.

Objectives

- Recognize newly-approved drugs used in solid tumor malignancies
- Describe the mechanism of action of newly-approved drugs used in solid tumor malignancies
- Appraise primary literature leading to FDA approval of new agents in solid tumors
- Distinguish the place in therapy for newly approved drugs used in solid tumor malignancies

Choose your own adventure!

Genitourinary	Breast + Gyn
Lung	Miscellaneous

Genitourinary

1. Relugolix (Orgovyx®) – advanced prostate cancer
2. Tivozanib (Fotivda®) – advanced Renal Cell Carcinoma (RCC)

Relugolix (Orgovyx®)

- Approved December 18, 2020
- Adults with advanced prostate cancer

Mechanism of Action	Oral Gonadotropin-releasing hormone (GnRH) receptor antagonist
Dosing	360 mg PO on Day 1, then 120 mg PO daily
PK/DDIs	<ul style="list-style-type: none">• Major substrate of Pgp• Minor substrate of CYP3A4 and CYP2C8• t_{1/2} = 25 hours
Adverse Effects	<ul style="list-style-type: none">• <i>Warnings:</i> QTc prolongation, ASCVD/DM• <i>Common:</i> hot flashes, increased TGs, glucose, increased AST/ALT, fatigue, musculoskeletal pain

Relugolix [package insert]. Brisbane, CA: Myovant Sciences, Inc., 2020.

HERO: Design

- Oral relugolix for androgen-deprivation therapy in advanced prostate cancer
- Randomized, open-label, phase 3 trial

Population	Randomization (2:1)	Endpoints
<ul style="list-style-type: none"> • Adenocarcinoma of the prostate • Candidates for ≥ 1 year of ADT • PSA/clinical relapse after curative-intent local intervention OR • De novo mCSPC OR • Advanced local disease unlikely to be cured with local intervention 	<ul style="list-style-type: none"> • Relugolix 120 mg PO daily • Leuprolide 22.5 mg IM q3mo 	<ul style="list-style-type: none"> • 1^o: Sustained testosterone suppression to castrate levels, day 29-48 weeks • 2^o: non-inferiority, Day 4 castrate testosterone levels, Day 15 profound castrate levels

Shore N et al. New Engl J Med. 2020; 382:2187-96.

HERO: Results

Baseline characteristics	<ul style="list-style-type: none"> • N = 934 (rel n=622, leu n=308) • North American (28.9%) • Mean baseline PSA (104.2 ng/mL, 68.6 ng/mL) • Presence of 1 CV risk factor (91.6%, 94.2%)
Efficacy	<ul style="list-style-type: none"> • 1^o: castrate testosterone levels through 48 weeks <ul style="list-style-type: none"> • 96.7% v. 88.8% (95% CI, 4.1 to 11.8; p<0.001) • 2^o: <ul style="list-style-type: none"> • Probability of castration on Day 4: 56% v. 0% • Probability of castration on Day 15: 98.7% v. 12% • Profound suppression (<20 ng/dL) on Day 15: 78.4% v. 1.0%
Safety	<ul style="list-style-type: none"> • Hot flash (54.3% v. 51.6%) • Diarrhea (12.2% v. 6.8%) • LFT elevations (1.4% v. 1.3%) • Major adverse CV events (MACE) (2.9% v. 6.2%)
Questions	<ul style="list-style-type: none"> • Cost effectiveness • Who are the best candidates for relugolix?

Shore N et al. New Engl J Med. 2020; 382:2187-96.

Tivozanib (Fotivda®)

- Approved March 10, 2021
- Adults with relapsed or refractory advanced RCC following ≥ 2 previous therapies

Mechanism of Action	Selective VEGFR tyrosine kinase inhibitor
Dosing	1.34 mg once daily on days 1-21 of a 28 day cycle
PK/DDIs	<ul style="list-style-type: none"> • Major substrate of CYP 3A4 • t_{1/2} = 111 hours
Adverse Effects	<ul style="list-style-type: none"> • Warnings: hypertension, cardiac, hemorrhage, proteinuria, RPLS, VTE, thyroid dysfunction, wound healing complications • Common: PPE (16%), diarrhea (35%), stomatitis (20%), dysphonia (23%), LFT & SCr elevation

Fotivda [package insert]. Boston, MA: Avero Pharmaceuticals, Inc., 2021.

Challenges in mRCC*

- Salvage after improved front-line therapies (e.g. Immune checkpoint inhibitors (ICI) + VEGFR combinations)
- Many off-target adverse effects with VEGFR TKIs
- Lack of guidance for 3rd & 4th line therapies

*See Appendix 1 for review of mRCC therapy options

TIVO-3: Design

• Tivozanib versus sorafenib in patients with advanced RCC: a phase 3, multicentre, randomized, controlled, open-label study

Population	Randomization	Endpoints
<ul style="list-style-type: none"> • mRCC • 2+ prior therapies (≥1 VEGFR TKI other than sorafenib) • Measurable disease on RECIST • ECOG 0 or 1 	<ul style="list-style-type: none"> • Tivozanib 1.5 mg PO daily • Sorafenib 400 mg PO BID 	<ul style="list-style-type: none"> • 1^o: PFS • 2^o: OS, objective response, duration of response, safety

Rini B et al. Lancet Oncol. 2020; 21:95-104.

TIVO-3: Results

Baseline characteristics	<ul style="list-style-type: none"> • N = 350 (tivo n=175, soraf n=175) • Male (72%, 73%) • Clear cell (94%, 91%) • Favorable risk (19%, 21%), IM risk (62%, 60%), poor risk (18%, 34%) • 2 previous therapies (62%, 59%) • ICI+VEGFR TKI (27%, 25%), 2 VEGFR TKIs (45%, 46%)
Efficacy	<ul style="list-style-type: none"> • PFS <ul style="list-style-type: none"> • 5.6 mo v. 3.9 mo (HR 0.73, 95% CI 0.56-0.94; p=0.016) • OS <ul style="list-style-type: none"> • 16.4 mo v. 19.7 mo (HR 0.99, 95% CI 0.76-1.29; p=0.95) • ORR: 18% v. 8% • Duration of response: NR v. 5.7 mo.
Safety	<ul style="list-style-type: none"> • Serious AEs (G3/4): 11% v. 10% • Dose interruptions/reductions: 48%/24% v. 63%/38% • More fatigue, hypertension, nausea, dysphonia, and skin toxicity with tivo
Questions	How is this drug going to be used?

Rini B et al. Lancet Oncol. 2020; 21:95-104.

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Which of the following is true regarding the mechanism of action and therapeutic effect of relugolix?

- A. Relugolix is a GnRH agonist.
- B. Tumor flare reaction is an anticipated adverse effect based on the mechanism of relugolix.
- C. Because of its mechanism and short half-life, relugolix displays faster recovery of testosterone levels than leuprolide after drug discontinuation.
- D. Relugolix and leuprolide have identical mechanisms of action.

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Genitourinary	Breast + Gyn
Lung	Miscellaneous

Breast + Gynecologic

1. Margetuximab-cmkb (Margenza®) – HER2+ metastatic breast cancer
2. Dostarlimab (Jemperli®) – advanced endometrial with mismatch repair deficient (dMMR)

Margetuximab (Margenza®)

- Approved December 16, 2020
- Adults with metastatic HER2+ breast cancer, in combination with chemotherapy, who have received 2+ lines of anti-HER2 therapy (≥1 for metastatic disease)

Mechanism of Action	Anti-HER2 monoclonal antibody; Fc optimized to increase affinity and ADCC
Dosing	15 mg/kg IV every 3 weeks in combination with chemotherapy
PK/DDIs	<ul style="list-style-type: none"> • Catabolism to small peptides + AAs • Anthracyclines (cardiotoxicity)
Adverse Effects	<ul style="list-style-type: none"> • Warnings: cardiotoxicity (higher in elderly), infusion-related reactions • Common: infusion-related reactions (13.3%), minimal emetic potential, increased SCr (68%)

Margenza [package insert]. Rockville, MD: MacroGenics, Inc., 2020.

SOPHIA: Design

- Efficacy of margetuximab vs trastuzumab in patients with pretreated ERBB2-positive advanced breast cancer
- Phase 3, randomized, open-label trial

Population	Randomization	Endpoints
<ul style="list-style-type: none"> Advanced HER2+ breast cancer Progressive disease after 2+ lines of anti-HER2 therapy, including pertuzumab 1-3 lines of nonhormonal metastatic BC therapy ECOG 0-1 	<ul style="list-style-type: none"> Margetuximab 15 mg/kg IV q3w + chemo Trastuzumab 6 mg/kg (8 mg/kg load) q3w + chemo 	<ul style="list-style-type: none"> 1^o: <ul style="list-style-type: none"> PFS OS 2^o: <ul style="list-style-type: none"> ORR

Rugo H et al. JAMA Oncol. 2021;7(4):573-584.

SOPHIA: Results

Baseline characteristics	<ul style="list-style-type: none"> N = 536 (marg n=266, trastuz n=270) Median age = 55, 56 years > 2 metastatic sites = 51.9%, 53.3% ER/PR+ = 59.4%, 53.7% >2 prior therapies = 34.2%, 33.3% <ul style="list-style-type: none"> Trastuzumab (100%), pertuzumab (100%, 99.6%), ado-trastuzumab emtansine (91%, 91.5%), lapatinib (15.4%, 14.4%) Chemo choice = vinorelbine (35.6%), capecitabine (26.7%), eribulin (4%), gemcitabine (12.3%)
Efficacy	<ul style="list-style-type: none"> PFS: <ul style="list-style-type: none"> 5.8 mo v. 4.9 mo (HR 0.76; 95% CI, 0.59-0.98; p = 0.03) OS: 26.1 mo v. 19.8 mo (HR 0.89; 95% CI, 0.69-1.13; p = 0.33) ORR: 22% v. 16% (p = 0.06)
Safety (all grade)	<ul style="list-style-type: none"> Fatigue: 42% v. 35.3% Infusion reactions: 13.3% v. 3.4% Many AEs likely related to chemo backbone
Questions	<ul style="list-style-type: none"> Will this approval change practice? What further studies would be helpful to answer this question?

Rugo H et al. JAMA Oncol. 2021;7(4):573-584.

Dostarlimab (Jemperli®)

- Approved April 22, 2021
- Adults with mismatch repair deficient (dMMR) recurrent or advanced endometrial cancer after progression/following a prior platinum-containing regimen

Mechanism of Action	Anti-PD-1 monoclonal antibody
Dosing	500 mg IV every 3 weeks x 4 doses, followed by 1 g IV every 6 weeks
PK/DDIs	<ul style="list-style-type: none"> Catabolism to small peptides + AAs Corticosteroids
Adverse Effects	<ul style="list-style-type: none"> Warnings: immune-related adverse events, infusion-related reactions Common: fatigue (46%), endocrine and metabolic (↓Ca, K, Na), diarrhea (26%), pruritis (14%), increased LFTs (15-25%), minimal emetic potential

Jemperli [package insert]. Research Triangle Park, NC: GlaxoSmithKline, 2021.

GARNET: Design

• Clinical activity and safety of the anti-programmed death 1 monoclonal antibody dostarlimab for patients with recurrent or advanced dMMR endometrial cancer: a nonrandomized phase 1 clinical trial

Population

- Advanced or recurrent dMMR EC
- ≤ 2 prior lines of treatment
- No prior ICI

→

Dostarlimab 500 mg IV q3w x 4, followed by 1g IV q6w

→

Endpoints

- ORR
- Duration of response

Oaknin A et al. JAMA Oncol. 2020;6(11):1766-1772.

GARNET: Results

Baseline characteristics	<ul style="list-style-type: none"> N = 71 Median age = 64 years 49% FIGO Stage III or IV disease at diagnosis 70.4% Type 1 EC Previous surgery (90.1%), radiation (78.9%), chemotherapy (100%)
Efficacy	<ul style="list-style-type: none"> ORR = 30 patients (42.3%) <ul style="list-style-type: none"> Response ongoing 25/30 (83.3), duration of response NR CR = 9 (12.7%) PR = 21 (29.6%) SD = 11 (15.5%)
Safety	<ul style="list-style-type: none"> Grade ≥ 3 AE: 46.2% (10.6% leading to withdrawal) Fatigue = 14.4% Pruritis = 9.6% Anemia = 6.7% Diarrhea = 15.4% Hypothyroidism = 8.7%
Questions	<ul style="list-style-type: none"> Why not use pembrolizumab?

Oaknin A et al. JAMA Oncol. 2020;6(11):1766-1772.

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Which of the following is a notable limitation of the SOPHIA trial evaluating margetuximab for previously-treated metastatic HER2+ breast cancer?

- A. Comparator group containing anti-HER2 monotherapy
- B. Not all patients received trastuzumab in a previous line of therapy
- C. Treatment arms were not balanced in regard to number of metastatic sites
- D. Study included HR+/HER2-negative patients

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Genitourinary	Breast + Gyn
Lung	Miscellaneous

Lung

1. Tepotinib (Tepmetko®) – NSCLC with MET exon 14 skipping
2. Amivantamab-vmjw (Rybrevant®) – NSCLC with EGFR exon20ins
3. Sotorasib (Lumakras®) – NSCLC with KRAS G12C mutation

Tepotinib (Tepmetko®)

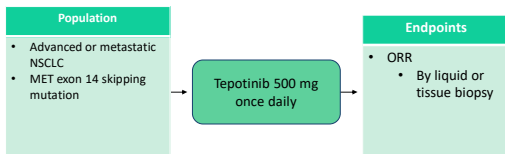
- Approved February 3, 2021
- Adults with newly-diagnosed or previously-treated metastatic NSCLC with MET exon 14 skipping alterations

Mechanism of Action	Selective MET tyrosine kinase inhibitor
Dosing	450 mg PO daily <u>with food</u>
PK/DDIs	<ul style="list-style-type: none"> • pKa = 9.5 (food increases absorption) • Minor substrate of CYP 3A4 • Minor substrate, and inhibitor of Pgp
Adverse Effects	<ul style="list-style-type: none"> • Warnings: hepatotoxicity, pulmonary toxicity • Common: edema (4-70%), ↑K (25%), minimal or low emetic potential, LFT elevations (35-50%)

Tepmetko [package insert]. Rockland, MA. EMD Serono, Inc., 2021.

VISION: Design

- Tepotinib in non-small-cell lung cancer with MET exon 14 skipping mutations
- Phase 2, open-label study



Paik P et al. N Engl J Med. 2020;383:931-43.

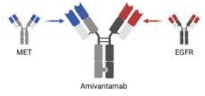
VISION: Results

Baseline characteristics	<ul style="list-style-type: none"> N = 99 Liquid biopsy 67%, Both liquid and tissue 27% Median age = 74 years Metastatic disease at entry 97% Previous treatment = 57% <ul style="list-style-type: none"> ICI = 46%
Efficacy	<ul style="list-style-type: none"> ORR = 46% (all PR) <ul style="list-style-type: none"> Liquid biopsy ORR = 48% Tissue biopsy ORR = 50% Median duration of response = 11.1 months
Safety (all grades)	<ul style="list-style-type: none"> AE leading to discontinuation 7% Edema 63% Nausea 26% Diarrhea 26% SCR inc 18% Pleural effusion 8% AST/ALT increased 7%
Questions	<ul style="list-style-type: none"> How will this be used in practice compared with capmatinib?

Paik P et al. N Engl J Med. 2020;383:931-43.

Amivantamab (Rybrevant®)

- Approved May 21, 2021
- Adults with locally advanced or metastatic NSCLC with EGFR exon 20 insertion mutations, whose disease have progression after platinum-based chemotherapy



Mechanism of Action	Bispecific anti-EGFR and MET monoclonal antibody
Dosing	<p><80kg: 350 mg IV on Day 1, 700 mg IV on Day 2, then 1,050 mg IV once weekly x 3 weeks, then 1,050 mg IV q2w</p> <p>≥80kg: 350 mg IV on Day 1, 1,050 mg IV on Day 2, then 1,400 mg IV once weekly x 3 weeks, then 14,00 mg IV q2w</p> <p>*diphenhydramine, acetaminophen, and corticosteroid pre-medication required</p>
PK/DDIs	<ul style="list-style-type: none"> None significant
Adverse Effects	<ul style="list-style-type: none"> Warnings: acneiform rash, infusion reactions, ocular toxicity, photosensitivity, pulmonary toxicity Common: edema (27%), paronychia (50%), rash (84%), diarrhea (16%), stomatitis (26%), ↓-Mg, Ph, K, Na, LFT elevations (MET), T5Cr

Rybrevant [package insert]. Horsham, PA: Janssen Biotech, Inc., 2021. Image created with Biorender

CHRYSALIS: Design

- Amivantamab in EGFR exon 20 insertion-mutated non-small cell lung cancer progressing on platinum chemotherapy: initial results from the phase I study
- Phase 1, open-label, dose-escalation and dose-expansion study

Population <ul style="list-style-type: none"> Metastatic or unresectable NSCLC progressed on or ineligible for SOC therapy Qualifying EGFR or MET mutation (exon20del = Cohort D) ECOG 0 or 1 	Amivantamab IV standard dose based on BW	Endpoints <ul style="list-style-type: none"> Dose-limiting toxicity ORR
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Park K et al. J Clin Oncol. 2021;epub DOI https://doi.org/10.1200/JCO.21.00662

CHRYSALIS: Results

Baseline characteristics	<ul style="list-style-type: none"> N = 81 Median age = 62 years 49% Asian Median lines of therapy = 2
Efficacy	<ul style="list-style-type: none"> ORR = 40% (4% CR, 36% PR, 48% SD)
Safety	<ul style="list-style-type: none"> AE leading to discontinuation 7% Rash 86% IRR 66% Paronychia 45% Stomatitis 21% Pruritis 17% Diarrhea 14% ILD 4%
Questions	<ul style="list-style-type: none"> Will this drug be warranted in the long run with a confirmatory study? Will less arduous dosing strategies become available?

Park K et al. J Clin Oncol. 2021;epub DOI https://doi.org/10.1200/JCO.21.00662

Sotorasib (Lumakras®)

- Approved May 28, 2021
- Adults with KRAS G12C-mutated locally advanced or metastatic NSCLC who have received at least 1 prior systemic therapy

Mechanism of Action	Specific RAS tyrosine kinase inhibitor
Dosing	960 mg PO daily
PK/DDIs	<ul style="list-style-type: none"> Nonenzymatic conjugation and oxidative metabolism via CYP3As Major substrate of CYP 3A4 Moderate inducer of CYP 3A4 Absorption increased with high fat meal; avoid PPIs/H2RAs
Adverse Effects	<ul style="list-style-type: none"> Warnings: hepatotoxicity, pulmonary toxicity Common: edema (15%), rash (12%), ↓Ca, Na, minimal or low emetic potential, LFT elevations (25-39%), fatigue, arthralgias

Lumakras. [package insert]. Thousand Oaks, CA: Amgen Inc., 2021.

CodeBreaK100: Design

- Sotorasib for lung cancers with KRAS p.G12C mutation
- Phase 2, single-arm trial

Population

- Advanced NSCLC with KRAS p.G12C mutation
- Previously treated with standard therapies

→

Sotorasib 960 mg PO daily

→

Endpoints

- 1^o: ORR
- 2^o: DOR, disease control

Skoulidia F et al. N Engl J Med. 2021 Jun 24;384(25):2371-2381.

CodeBreaK100: Results

Baseline characteristics	<ul style="list-style-type: none">N = 126Received platinum therapy and ICI = 81%
Efficacy	<ul style="list-style-type: none">ORR = 37.1% (CR 3.2%, PR 33.9%)Median duration of response = 11.1 monthsDisease control = 80.6%Median PFS = 6.8 monthsMedian OS = 12.5 months
Safety	<ul style="list-style-type: none">TRAE = 69.8%Grade 3+ = 20.1%Hepatotoxicity = 1.7%ILD/pneumonitis = 0.6%≥20%: diarrhea, MSK pain, nausea, fatigue, cough
Questions	<ul style="list-style-type: none">Confirmatory Phase 3 studies?

Skoulidia F et al. N Engl J Med. 2021 Jun 24;384(25):2371-2381.

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Which newly-approved drugs for NSCLC target mesenchymal-epithelial transition (MET)?

- A. Amivantamab and sotorasib
- B. Sotorasib
- C. Amivantamab and tepotinib
- D. Tepotinib

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Miscellaneous

1. Pralsetinib (Gavreto®) – advanced or metastatic RET-altered thyroid and lung cancers
2. Infigratinib (Truseltiq®) – cholangiocarcinoma with FGFR-2 alteration

Pralsetinib (Gavreto®)

- Approved December 1, 2020
- Adults and pediatric patients ≥ 12 years with advanced or metastatic RET-mutated medullary thyroid cancer OR RET fusion-positive thyroid cancer who are radioactive iodine-refractory
- Adult patients with RET fusion-positive mNSCLC

Mechanism of Action	RET tyrosine kinase inhibitor (& many others, including VEGFR, FGFR2, and JAK2)
Dosing	400 mg PO daily on an empty stomach
PK/DDIs	<ul style="list-style-type: none"> • Major substrate of CYP 3A4 • Minor substrate of CYP1A2 and 2D6 • Minor substrate of Pgp • Cmax and Tmax increased by food
Adverse Effects	<ul style="list-style-type: none"> • Warnings: bone marrow suppression, hemorrhage, hepatotoxicity, hypertension, pulmonary toxicity, TLS (MTC), wound healing impairment • Common: edema (20-29%), hypertension (28-40%), rash (24%), electrolyte abnormalities, minimal to low emetic potential, myelosuppression (G3 3-16%), peripheral neuropathy (20%), ↑ SCr, CK

Gavreto [package insert]. Cambridge, MA: Blueprint Medicines Corporation. 2020.

ARROW: Design

• Phase 1/2 Study of the Highly-selective RET Inhibitor, Pralsetinib (BLU-667), in Patients With Thyroid Cancer, Non-Small Cell Lung Cancer, and Other Advanced Solid Tumors (ARROW)

• Multi-cohort, open-label, phase 1 & 2 study

Population

- Unresectable, advanced RET-altered solid tumor per local assessment (9 Groups)

→

Pralsetinib 400 mg PO daily

→

Endpoints

- Phase 1: MTD
- Phase 2:
 - ORR
 - DOR

MTD: maximum tolerated dose

Gainor. J et al. Lancet Oncol. 2021; 22: 959-69.

ARROW: Results

NSCLC		MTC		RET-fusion thyroid	
Patient pop.	RET-fusion positive mNSCLC, previously treated	Patient pop.	RET-mutated MTC, previously treated	Patient pop.	RET-fusion positive thyroid cancer, previously treated with radioactive iodine
N	87	N	55	N	9
ORR (%)	57	ORR (%)	60	ORR (%)	89 (all PR)
DOR	NE, 80% ≥6 months	DOR (mo.)	NR, 79% ≥6 months	DOR (mo.)	NR, 100% ≥6 months
Patient pop.	RET-fusion positive mNSCLC, treatment naïve	Patient pop.	RET-mutated MTC, treatment naïve		
N	27	N	29		
ORR (%)	70	ORR (%)	66		
DOR (mo.)	9, 58% ≥6 months	DOR (mo.)	NR, 84% ≥6 months		

MTC: metastatic thyroid cancer

Gainor. J et al. Lancet Oncol. 2021; 22: 959-69.

Infigratinib (Truseltiq®)

- Approved May 28, 2021
- Adults with previously treated, unresectable locally advanced or metastatic cholangiocarcinoma with FGFR2 fusion or other rearrangement

Mechanism of Action	FGFR1-3 tyrosine kinase inhibitor
Dosing	125 mg PO on an empty stomach daily for 21 days, followed by 7 days off in 28-day cycles
PK/DDIs	<ul style="list-style-type: none"> • Major substrate of CYP 3A4 • Absorption increased with high fat meal; avoid PPIs/H2RAs
Adverse Effects	<ul style="list-style-type: none"> • Warnings: ocular toxicity, hyperphosphatemia and soft-tissue mineralization, embryo-fetal toxicity • Common: ≥ 20%: nail toxicity, stomatitis, dry eye, fatigue, alopecia, PPE, arthralgia, dysgeusia, constipation, dry mouth, eyelash changes, diarrhea, dry skin

Truseltiq [package insert], Brisbane, CA, QED Therapeutics, Inc. 2021.

CBGJ398X2204: Design

- A phase II study of infigratinib in previously treated advanced/metastatic cholangiocarcinoma with FGFR gene fusions/alterations
- Multicenter, open-label, single-arm trial

Population

- Advanced or metastatic cholangiocarcinoma
- FGFR genetic alterations
- Received prior gemcitabine or FGFR2 inhibitor for FGFR2 fusion

→

Infigratinib 125 mg
PO daily Days 1-21,
q28d

→

Endpoints

- 1°: ORR
- 2°: OS

Javle M et al. J Clin Oncol. 10.1200/JCO.2021.39.3_suppl.TPS356 Journal of Clinical Oncology 39, no. 3_suppl

CBGJ398X2204: Results

Baseline characteristics	• N = 108
Efficacy	<ul style="list-style-type: none"> • ORR =23% (CR 1, PR 24) • 8 patients maintained response for ≥6 months • Median DOR = 5 months
Safety	<ul style="list-style-type: none"> • Calcium phosphate homeostasis (85.2%) • Tissue calcification (2.8%) • Pathological fracture (0.9%) • Vascular calcification/mineralization (0.9%) • Eye disorders (7.0.4%) • Central serous retinopathy/retinal pigment epithelial detachment-like events (16.7%)
Questions	• Place in therapy as compared with pemigatinib?

Javle M et al. J Clin Oncol. 10.1200/JCO.2021.39.3_suppl.TPS356 Journal of Clinical Oncology 39, no. 3_suppl
Cancer Network. Antitumor Effects Noted With Infigratinib in FGFR2+ Cholangiocarcinoma Refractory to Chemotherapy. Available at: <https://www.cancertherapyadvisor.com/abstracts/2021/09/01/antitumor-effects-noted-with-infigratinib-in-fgfr2-cholangiocarcinoma-refractory-to-chemotherapy/>

CBGJ398X2204: Results

Useful in Certain Circumstances¹

- For *NRXK* gene fusion-positive tumors:
 - Entrectinib²
 - Larotrectinib³
- For *MSI-H/dMMR* tumors/TMB-H tumors:
 - Pembrolizumab^{4,5,6,13,14}
- For cholangiocarcinoma with *FGFR2* fusions or rearrangements:
 - Pemigatinib¹⁵
 - Infigratinib¹⁶
- For cholangiocarcinoma with *IDH1* mutations:
 - Ivosidenib¹⁷
- For *BRAF-V600E* mutated tumors:
 - Dabrafenib + trametinib^{18,19}
 - Nivolumab²⁰ (category 2B)
 - Lenvatinib + pembrolizumab²¹ (category 2B)

Pemigatinib	Infigratinib
<ul style="list-style-type: none"> • Approved 4/17/2020 • 1 tablet daily • With or without food 	<ul style="list-style-type: none"> • Approved 5/28/21 • 2 capsules (1 x 100mg, 1 x 25mg) daily • On empty stomach • Avoid PPIs/H2RAs

NCCN. Hepatobiliary Cancers. v4.2021. Available at: https://www.nccn.org/professionals/physician_gls/pdf/hepatobiliary.pdf

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Which of the following should be evaluated prior to initiating therapy with infigratinib?

A. Ensure patient discontinues concomitant acid-suppressing therapy.

B. Review NGS results to confirm *FGFR* fusion or rearrangement.

C. Confirm progression of disease after at least 1 prior therapy.

D. All of the above

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Appendix 1: Abbreviations

- ADT = androgen-deprivation therapy
- CR = complete response
- dMMR = mismatch repair deficient
- EC = endometrial cancer
- EGFR = epidermal growth factor receptor
- FGFR2 = fibroblast growth factor receptor 2
- GnRH = gonadotropin releasing hormone
- ICI = immune checkpoint inhibitor
- mCSPC = metastatic castration-sensitive prostate cancer
- MET = mesenchymal-epithelial transition
- NGS = next-generation sequencing
- NSCLC = non-small cell lung cancer
- ORR = overall response rate
- OS = overall survival
- PFS = progression free survival
- PPE = palmar-plantar erythrodesia
- PR = partial response
- RCC = renal cell carcinoma
- RPLS = Reversible posterior leukoencephalopathy syndrome
- SD = stable disease
- VTE = venous thromboembolism
- VEGFR = vascular endothelial growth factor
- RET = rearranged during transfection

Appendix 2

- NCCN Recommended therapy options in mRCC


1L Favorable risk clear cell (Cat 1):

- axitinib + pembrolizumab
- cabozantinib + nivolumab
- lenvatinib + pembrolizumab

1L Poor-IM risk clear cell (Cat 1):

- axitinib + pembrolizumab
- cabozantinib + nivolumab
- nivolumab/ipilimumab
- lenvatinib + pembrolizumab

1L non-clear cell (Cat 1): cabozantinib, sunitinib



Subsequent therapy clear cell (Cat 1):

cabozantinib, lenvatinib + everolimus, nivolumab, axitinib, pazopanib, sorafenib (cCt 3)

Subsequent therapy non-clear cell:

nivolumab, pembrolizumab, lenvatinib + everolimus, bevacizumab, pazopanib

NCCN. Kidney Cancer. v1.2022. Available at: https://www.nccn.org/professionals/physician_gls/pdf/kidney.pdf

**Solid Tumor
Drug Updates**

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