BRAFTOVI- encorafenib capsule
Array BioPharma Inc.

HIGHLIGHTS OF PRESCRIBING INFORMATION
These highlights do not include all the information needed to use BRAFTOVI safely and effectively. See full prescribing information for BRAFTOVI.

BRAFTOVI® (encorafenib) capsules, for oral use
Initial U.S. Approval: 2018

INDICATIONS AND USAGE

BRAFTOVI is a kinase inhibitor indicated:

- in combination with binimetinib, for the treatment of patients with unresectable or metastatic melanoma with a BRAF V600E or V600K mutation, as detected by an FDA-approved test. (1.1, 2.1)
- in combination with cetuximab, for the treatment of adult patients with metastatic colorectal cancer (CRC) with a BRAF V600E mutation, as detected by an FDA-approved test, after prior therapy. (1.2, 2.1)

Limitations of Use
BRAFTOVI is not indicated for treatment of patients with wild-type BRAF melanoma or wild-type BRAF CRC. (1.3, 5.2)

DOSAGE AND ADMINISTRATION

- Melanoma
  - Confirm the presence of BRAF V600E or V600K mutation in tumor specimens prior to the initiation of BRAFTOVI. (2.1)
  - The recommended dose is 450 mg orally once daily in combination with binimetinib. (2.2)
- CRC
  - Confirm the presence of BRAF V600E mutation in tumor specimens prior to the initiation of BRAFTOVI. (2.1)
  - The recommended dose is 300 mg orally once daily in combination with cetuximab. (2.3)
- Take BRAFTOVI with or without food. (2.4)

DOSAGE FORMS AND STRENGTHS

Capsules: 75 mg. (3)

CONTRAINDICATIONS

None. (4)

WARNINGS AND PRECAUTIONS

- New Primary Malignancies, cutaneous and non-cutaneous: Can occur. Monitor for malignancies and perform dermatologic evaluations prior to, while on therapy, and following discontinuation of treatment. (5.1)
- Tumor Promotion in BRAF Wild-Type Tumors: Increased cell proliferation can occur with BRAF inhibitors. (5.2)
- Hemorrhage: Major hemorrhagic events can occur. (5.3)
- Uveitis: Perform ophthalmologic evaluation at regular intervals and for any visual disturbances. (5.4)
- QT Prolongation: Monitor electrolytes before and during treatment. Correct electrolyte abnormalities and control for cardiac risk factors for QT prolongation. Withhold BRAFTOVI for QTc of 500 ms or greater. (5.5)
- Embryo-Fetal Toxicity: Can cause fetal harm. Advise females with reproductive potential of potential risk to the fetus and to use effective non-hormonal method of contraception. (5.6, 8.1, 8.3)

ADVERSE REACTIONS

Melanoma: Most common adverse reactions (≥25%) for BRAFTOVI, in combination with binimetinib, are fatigue, nausea, vomiting, abdominal pain, and arthralgia. (6.1)
CRC: Most common adverse reactions (≥25%) for BRAFTOVI, in combination with cetuximab, are fatigue, nausea, diarrhea, dermatitis acneiform, abdominal pain, decreased appetite, arthralgia, and rash. (6.1)

To report SUSPECTED ADVERSE REACTIONS, contact Pfizer Inc. at 1-800-438-1985 or FDA at 1-800-FDA-1088 or www.fda.gov/medwatch.

DRUG INTERACTIONS

- Strong or moderate CYP3A4 inhibitors: Avoid coadministration. If unavoidable, reduce BRAFTOVI dosage. (2.6, 7.1)
- Strong or moderate CYP3A4 inducers: Avoid coadministration. (7.1)
- Sensitive CYP3A4 substrates: Coadministration with BRAFTOVI may increase toxicity or decrease efficacy of these agents. Avoid coadministration of BRAFTOVI with hormonal contraceptives. (7.2)
- Transporters: Dose reductions of drugs that are substrates of OATP1B1, OATP1B3, or BCRP may be required when used concomitantly with BRAFTOVI. (7.2, 12.3)

USE IN SPECIFIC POPULATIONS

- Lactation: Advise not to breastfeed. (8.2)
- Males of Reproductive Potential: BRAFTOVI may impair fertility. (8.3)

See 17 for PATIENT COUNSELING INFORMATION and Medication Guide.

Revised: 2/2022

FULL PRESCRIBING INFORMATION: CONTENTS*

* Sections or subsections omitted from the full prescribing information are not listed.

FULL PRESCRIBING INFORMATION

1 INDICATIONS AND USAGE

1.1 BRAF V600E or V600K Mutation-Positive Unresectable or Metastatic Melanoma

BRAFTOVI® is indicated, in combination with binimetinib, for the treatment of patients with unresectable or metastatic melanoma with a BRAF V600E or V600K mutation, as detected by an FDA-approved test *[see Dosage and Administration (2.1)]*.

1.2 BRAF V600E Mutation-Positive Metastatic Colorectal Cancer (CRC)

BRAFTOVI is indicated, in combination with cetuximab, for the treatment of adult patients with metastatic colorectal cancer (CRC) with a BRAF V600E mutation, as detected by an FDA-approved test, after prior therapy *[see Dosage and Administration (2.1)]*.

1.3 Limitations of Use

BRAFTOVI is not indicated for treatment of patients with wild-type BRAF melanoma or wild-type BRAF CRC *[see Warnings and Precautions (5.2)]*.

2 DOSAGE AND ADMINISTRATION

2.1 Patient Selection

BRAF V600E or V600K Mutation-Positive Unresectable or Metastatic Melanoma

Confirm the presence of a BRAF V600E or V600K mutation in tumor specimens prior to initiating BRAFTOVI *[see Warnings and Precautions (5.2), Clinical Studies (14.1)]*. Information on FDA-approved tests for the detection of BRAF V600E and V600K mutations in melanoma is available at: http://www.fda.gov/CompanionDiagnostics.

BRAF V600E Mutation-Positive Metastatic Colorectal Cancer (CRC)

Confirm the presence of a BRAF V600E mutation in tumor specimens prior to initiating BRAFTOVI *[see Warnings and Precautions (5.2), Clinical Studies 14.2)]*. Information on FDA-approved tests for the detection of BRAF V600E mutations in CRC is available at: http://www.fda.gov/CompanionDiagnostics.

2.2 Recommended Dosage for BRAF V600E or V600K Mutation-Positive Unresectable or Metastatic Melanoma

The recommended dosage of BRAFTOVI is 450 mg (six 75 mg capsules) orally once daily in combination with binimetinib until disease progression or unacceptable toxicity. Refer to the binimetinib prescribing information for recommended binimetinib dosing information.

2.3 Recommended Dosage for BRAF V600E Mutation-Positive Metastatic Colorectal Cancer (CRC)

The recommended dosage of BRAFTOVI is 300 mg (four 75 mg capsules) orally once daily in combination with cetuximab until disease progression or unacceptable toxicity. Refer to the cetuximab prescribing information for recommended cetuximab dosing information.

2.4 Administration

BRAFTOVI may be taken with or without food *[see Clinical Pharmacology (12.3)]*. Do not take a missed dose of BRAFTOVI within 12 hours of the next dose of BRAFTOVI.

Do not take an additional dose if vomiting occurs after BRAFTOVI administration but continue with the next scheduled dose.

2.5 Dosage Modifications for Adverse Reactions

BRAF V600E or V600K Mutation-Positive Unresectable or Metastatic Melanoma

If binimetinib is withheld, reduce BRAFTOVI to a maximum dose of 300 mg (four 75 mg capsules) once daily until binimetinib is resumed *[see Warnings and Precautions (5.7)]*.

Dose reductions for adverse reactions associated with BRAFTOVI are presented in Table 1.

Table 1: Recommended Dose Reductions for BRAFTOVI for Adverse Reactions – Melanoma

Action	Recommended Dose
First Dose Reduction	300 mg (four 75 mg capsules) orally once daily
Second Dose Reduction	225 mg (three 75 mg capsules) orally once daily
Subsequent Modification	Permanently discontinue if unable to tolerate BRAFTOVI 225 mg (three 75 mg capsules) once daily

BRAF V600E Mutation-Positive Metastatic Colorectal Cancer (CRC)

If cetuximab is discontinued, discontinue BRAFTOVI.

Dose reductions for adverse reactions associated with BRAFTOVI are presented in Table 2.

Table 2: Recommended Dose Reductions for BRAFTOVI for Adverse Reactions – CRC

Action	Recommended Dose
First Dose Reduction	225 mg (three 75 mg capsules) orally once daily
Second Dose Reduction	150 mg (two 75 mg capsules) orally once daily
Subsequent Modification	Permanently discontinue if unable to tolerate BRAFTOVI 150 mg (two 75 mg capsules) once daily

BRAF V600E or V600K Mutation-Positive Unresectable or Metastatic Melanoma and BRAF V600E Mutation-Positive Metastatic Colorectal Cancer (CRC)

Dosage modifications for adverse reactions associated with BRAFTOVI are presented in Table 3.

Table 3: Recommended Dosage Modifications for BRAFTOVI for Adverse Reactions

Severity of Adverse Reaction*	Dose Modification for BRAFTOVI
New Primary Malignancies [see Warnings and Precautions (5.1)]	
Non-Cutaneous RAS Mutation-positive Malignancies	Permanently discontinue BRAFTOVI.
Uveitis [see Warnings and Precautions (5.4)]	
• Grade 1–3	If Grade 1 or 2 does not respond to specific ocular therapy, or for Grade 3 uveitis, withhold BRAFTOVI for up to 6 weeks. • If improved, resume at same or reduced dose. • If not improved, permanently discontinue BRAFTOVI.
• Grade 4	Permanently discontinue BRAFTOVI.
QTc Prolongation [see Warnings and Precautions (5.5)]	
• QTcF greater than 500 ms and less than or equal to 60 ms increase from baseline	Withhold BRAFTOVI until QTcF less than or equal to 500 ms. Resume at reduced dose. • If more than one recurrence, permanently discontinue BRAFTOVI.
• QTcF greater than 500 ms and greater than 60 ms increase from baseline	Permanently discontinue BRAFTOVI.
Hepatotoxicity	
• Grade 2 AST or ALT increased	Maintain BRAFTOVI dose. • If no improvement within 4 weeks, withhold BRAFTOVI until improves to Grade 0–1 or to pretreatment/baseline levels and then resume at same dose.
• Grade 3 or 4 AST or ALT increased	See *Other Adverse Reactions*.
Dermatologic (other than Hand-foot Skin Reaction [HFSR])	
• Grade 2	If no improvement within 2 weeks, withhold BRAFTOVI until Grade 0–1. Resume at same dose.
• Grade 3	Withhold BRAFTOVI until Grade 0–1. Resume at same dose if first occurrence or reduce dose if recurrent.
• Grade 4	Permanently discontinue BRAFTOVI.
Other Adverse Reactions (including Hemorrhage [see Warnings and Precautions (5.3)] and HFSR)†	
• Recurrent Grade 2 or • First occurrence of any Grade 3	Withhold BRAFTOVI for up to 4 weeks. • If improves to Grade 0–1 or to pretreatment/baseline level, resume at reduced dose. • If no improvement, permanently discontinue BRAFTOVI.
• First occurrence of any Grade 4	Permanently discontinue BRAFTOVI or Withhold BRAFTOVI for up to 4 weeks. • If improves to Grade 0–1 or to pretreatment/baseline level, then resume at reduced dose. • If no improvement, permanently discontinue BRAFTOVI.
• Recurrent Grade 3	Consider permanently discontinuing BRAFTOVI.
• Recurrent Grade 4	Permanently discontinue BRAFTOVI.

* National Cancer Institute Common Terminology Criteria for Adverse Events (NCI CTCAE) version 4.03.

† Dose modification of BRAFTOVI when administered with binimetinib or with cetuximab is not recommended for new primary cutaneous malignancies; ocular events other than uveitis, iritis, and iridocyclitis; interstitial lung disease/pneumonitis; cardiac dysfunction; creatine phosphokinase (CPK) elevation; rhabdomyolysis; and venous thromboembolism.

Refer to the binimetinib or cetuximab prescribing information for dose modifications for adverse reactions associated with each product, as appropriate.

2.6 Dose Modifications for Coadministration With Strong or Moderate CYP3A4 Inhibitors

Avoid coadministration of BRAFTOVI with strong or moderate CYP3A4 inhibitors. If coadministration is unavoidable, reduce the BRAFTOVI dose according to the recommendations in Table 4. After the inhibitor has been discontinued for 3 to 5 elimination half-lives, resume the BRAFTOVI dose that was taken prior to initiating the CYP3A4 inhibitor *[see Drug Interactions (7.1), Clinical Pharmacology (12.3)]*.

Table 4: Recommended Dose Reductions for BRAFTOVI for Coadministration With Strong or Moderate CYP3A4 Inhibitors

Current Daily Dose*	Dose for Coadministration with Moderate CYP3A4 Inhibitor	Dose for Coadministration with Strong CYP3A4 Inhibitor
450 mg	225 mg (three 75 mg capsules)	150 mg (two 75 mg capsules)
300 mg	150 mg (two 75 mg capsules)	75 mg
225 mg	75 mg	75 mg
150 mg	75 mg	75 mg†

* Current daily dose refers to recommended dose of BRAFTOVI based on indication or reductions for adverse reactions based on dosing recommendations in Table 1 (Melanoma) and Table 2 (CRC).

† Encorafenib exposure at the 75 mg QD BRAFTOVI dosage when coadministered with a strong CYP3A4 inhibitor is expected to be higher than at the 150 mg QD dosage in the absence of a CYP3A4 inhibitor and similar to exposure at the 225 mg QD dosage in the absence of a CYP3A4 inhibitor. Monitor patients closely for adverse reactions and use clinical judgement when using BRAFTOVI with strong CYP3A4 inhibitors at the 150 mg dose level.

3 DOSAGE FORMS AND STRENGTHS

Capsules: 75 mg, hard gelatin, stylized "A" on beige cap and "LGX 75mg" on white body.

4 CONTRAINDICATIONS

None.

5 WARNINGS AND PRECAUTIONS

5.1 New Primary Malignancies

New primary malignancies, cutaneous and non-cutaneous, have been observed in patients treated with BRAF inhibitors and can occur with BRAFTOVI.

Cutaneous Malignancies

In COLUMBUS, cutaneous squamous cell carcinoma (cuSCC), including keratoacanthoma (KA), occurred in 2.6%, and basal cell carcinoma occurred in 1.6% of patients who received BRAFTOVI in combination with binimetinib. Median time to first occurrence of cuSCC/KA was 5.8 months (range 1 to 9 months) *[see Adverse Reactions (6.1)]*.

For patients who received BRAFTOVI as a single agent, cuSCC/KA was reported in 8%, basal cell carcinoma in 1%, and a new primary melanoma in 5% of patients.

In BEACON CRC, cuSCC/KA occurred in 1.4% of patients with CRC, and a new primary melanoma occurred in 1.4% of patients who received BRAFTOVI in combination with cetuximab.

Perform dermatologic evaluations prior to initiating treatment, every 2 months during treatment, and for up to 6 months following discontinuation of treatment. Manage suspicious skin lesions with excision and dermatopathologic evaluation. Dose modification is not recommended for new primary cutaneous malignancies.

Non-Cutaneous Malignancies

Based on its mechanism of action, BRAFTOVI may promote malignancies associated with activation of RAS through mutation or other mechanisms *[see Warnings and Precautions (5.2)]*. Monitor patients receiving BRAFTOVI for signs and symptoms of non-cutaneous malignancies. Discontinue BRAFTOVI for RAS mutation-positive non-cutaneous malignancies *[see Dosage and Administration (2.5)]*.

5.2 Tumor Promotion in BRAF Wild-Type Tumors

In vitro experiments have demonstrated paradoxical activation of MAP-kinase signaling and increased cell proliferation in BRAF wild-type cells, which are exposed to BRAF inhibitors. Confirm evidence of BRAF V600E or V600K mutation prior to initiating BRAFTOVI *[see Indications and Usage (1), Dosage and Administration (2.1)]*.

5.3 Hemorrhage

In COLUMBUS, hemorrhage occurred in 19% of patients receiving BRAFTOVI in combination with binimetinib; Grade 3 or greater hemorrhage occurred in 3.2% of patients. The most frequent hemorrhagic events were gastrointestinal, including rectal hemorrhage (4.2%), hematochezia (3.1%), and hemorrhoidal hemorrhage (1%). Fatal intracranial hemorrhage in the setting of new or progressive brain metastases occurred in 1.6% of patients.

In BEACON CRC, hemorrhage occurred in 19% of patients receiving BRAFTOVI in combination with cetuximab; Grade 3 or higher hemorrhage occurred in 1.9% of patients, including fatal gastrointestinal hemorrhage in 0.5% of patients. The most frequent hemorrhagic events were epistaxis (6.9%), hematochezia (2.3%) and rectal hemorrhage (2.3%).

Withhold, reduce dose, or permanently discontinue based on severity of adverse reaction *[see Dosage and Administration (2.5), Adverse Reactions (6.1)]*.

5.4 Uveitis

Uveitis, including iritis and iridocyclitis, has been reported in patients treated with BRAFTOVI in combination with binimetinib. In COLUMBUS, the incidence of uveitis among patients treated with BRAFTOVI in combination with binimetinib was 4%.

Assess for visual symptoms at each visit. Perform an ophthalmologic evaluation at regular intervals and for new or worsening visual disturbances, and to follow new or persistent ophthalmologic findings. Withhold, reduce dose, or permanently discontinue based on severity of adverse reaction *[see Dosage and Administration (2.5), Adverse Reactions (6.1)]*.

5.5 QT Prolongation

BRAFTOVI is associated with dose-dependent QTc interval prolongation in some patients *[see Clinical Pharmacology (12.2)]*. In COLUMBUS, an increase in QTcF to >500 ms was measured in 0.5% (1/192) of patients who received BRAFTOVI in combination with binimetinib.

Monitor patients who already have or who are at significant risk of developing QTc prolongation, including patients with known long QT syndromes, clinically significant bradyarrhythmias, severe or uncontrolled heart failure and those taking other medicinal products associated with QT prolongation. Correct hypokalemia and hypomagnesemia prior to and during BRAFTOVI administration. Withhold, reduce dose, or permanently discontinue for QTc >500 ms *[see Dosage and Administration (2.5), Adverse Reactions (6.1)]*.

5.6 Embryo-Fetal Toxicity

Based on its mechanism of action, BRAFTOVI can cause fetal harm when administered to a pregnant woman. Encorafenib produced embryo-fetal developmental changes in rats and rabbits and was an abortifacient in rabbits at doses greater than or equal to those resulting in exposures approximately 26 (in the rat) and 178 (in the rabbit) times the human exposure at the recommended dose of 450 mg, with no clear findings at lower doses.

Advise women of the potential risk to a fetus. Advise females of reproductive potential to use an effective, non-hormonal method of contraception since BRAFTOVI can render hormonal contraceptives ineffective, during treatment and for 2 weeks after the final dose of BRAFTOVI *[see Use in Specific Populations (8.1, 8.3)]*.

5.7 Risks Associated With BRAFTOVI as a Single Agent

BRAFTOVI when used as a single agent is associated with an increased risk of certain adverse reactions compared to when BRAFTOVI is used in combination with binimetinib. In COLUMBUS, Grades 3 or 4 dermatologic reactions occurred in 21% of patients treated with BRAFTOVI single agent compared to 2% of patients treated with BRAFTOVI in combination with binimetinib *[see Warnings and Precautions (5.1), Adverse Reactions (6.1)]*.

If binimetinib is temporarily interrupted or permanently discontinued, reduce the dose of BRAFTOVI as recommended *[see Dosage and Administration (2.5)]*.

5.8 Risks Associated With Combination Treatment

BRAFTOVI is indicated for use as part of a regimen in combination with binimetinib or cetuximab. Refer to the prescribing information for binimetinib and cetuximab for additional risk information.

6 ADVERSE REACTIONS

The following adverse reactions are described elsewhere in the labeling:

- New Primary Malignancies *[see Warnings and Precautions (5.1)]*
- Hemorrhage *[see Warnings and Precautions (5.3)]*
- Uveitis *[see Warnings and Precautions (5.4)]*
- QT Prolongation *[see Warnings and Precautions (5.5)]*

6.1 Clinical Trials Experience

Because clinical trials are conducted under widely varying conditions, adverse reaction rates observed in the clinical trials of a drug cannot be directly compared to rates in the clinical trials of another drug and may not reflect the rates observed in practice.

BRAF V600E or V600K Mutation-Positive Unresectable or Metastatic Melanoma

The safety of BRAFTOVI in combination with binimetinib is described in 192 patients with BRAF V600 mutation-positive unresectable or metastatic melanoma who received BRAFTOVI (450 mg once daily) in combination with binimetinib (45 mg twice daily) in a randomized open-label, active-controlled trial (COLUMBUS).

The COLUMBUS trial *[see Clinical Studies (14.1)]* excluded patients with a history of Gilbert's syndrome, abnormal left ventricular ejection fraction, prolonged QTc (>480 ms), uncontrolled hypertension, and history or current evidence of retinal vein occlusion. The median duration of exposure was 11.8 months for patients treated with BRAFTOVI in combination with binimetinib and 6.2 months for patients treated with vemurafenib.

The most common (≥25%) adverse reactions in patients receiving BRAFTOVI in combination with binimetinib were fatigue, nausea, vomiting, abdominal pain, and arthralgia.

Adverse reactions leading to dose interruptions of BRAFTOVI occurred in 30% of patients receiving BRAFTOVI in combination with binimetinib; the most common were nausea (7%), vomiting (7%), and pyrexia (4%). Adverse reactions leading to dose reductions of BRAFTOVI occurred in 14% of patients receiving BRAFTOVI in combination with binimetinib; the most common were arthralgia (2%), fatigue (2%), and nausea (2%). Five percent (5%) of patients receiving BRAFTOVI in combination with binimetinib experienced an adverse reaction that resulted in permanent discontinuation of BRAFTOVI; the most common were hemorrhage in 2% and headache in 1% of patients.

Table 5 and Table 6 present adverse drug reactions and laboratory abnormalities, respectively, identified in COLUMBUS. The COLUMBUS trial was not designed to demonstrate a statistically significant difference in adverse reaction rates for BRAFTOVI in combination with binimetinib, as compared to vemurafenib, for any specific adverse reaction listed in Table 5.

Table 5: Adverse Reactions Occurring in ≥10% of Patients Receiving BRAFTOVI in Combination With Binimetinib in COLUMBUS*

Adverse Reaction	BRAFTOVI with binimetinib N=192		Vemurafenib N=186	
	All Grades (%)	Grades 3 and 4† (%)	All Grades (%)	Grades 3 and 4 (%)
General Disorders and Administration Site Conditions				
Fatigue‡	43	3	46	6
Pyrexia‡	18	4	30	0
Gastrointestinal Disorders				
Nausea	41	2	34	2
Vomiting‡	30	2	16	1
Abdominal pain‡	28	4	16	1
Constipation	22	0	6	1
Musculoskeletal and Connective Tissue Disorders				
Arthralgia‡	26	1	46	6
Myopathy‡	23	0	22	1
Pain in extremity	11	1	13	1
Skin and Subcutaneous Tissue Disorders				
Hyperkeratosis‡	23	1	49	1
Rash‡	22	1	53	13
Dry skin‡	16	0	26	0
Alopecia‡	14	0	38	0
Pruritus‡	13	1	21	1
Nervous System Disorders				
Headache‡	22	2	20	1
Dizziness‡	15	3	4	0
Peripheral neuropathy‡	12	1	13	2
Vascular Disorders				
Hemorrhage‡	19	3	9	2

* Grades per National Cancer Institute CTCAE v4.03.
† Grade 4 adverse reactions limited to fatigue (n=1), pruritus (n=1) and rash (n=1) in the BRAFTOVI with binimetinib arm.
‡ Represents a composite of multiple, related preferred terms.

BRAFTOVI when used as a single agent increases the risk of certain adverse reactions compared to BRAFTOVI in combination with binimetinib. In patients receiving BRAFTOVI 300 mg orally once daily as a single agent, the following adverse reactions were observed at a higher rate (≥5%) compared to patients receiving BRAFTOVI in combination with binimetinib: palmar-plantar erythrodysesthesia syndrome (51% vs. 7%), hyperkeratosis (57% vs. 23%), dry skin (38% vs. 16%), erythema (16% vs. 7%), rash (41% vs. 22%), alopecia (56% vs. 14%), pruritus (31% vs. 13%), arthralgia (44% vs. 26%), myopathy (33% vs. 23%), back pain (15% vs. 9%), dysgeusia (13% vs. 6%), and acneiform dermatitis (8% vs. 3%).

Other clinically important adverse reactions occurring in <10% of patients who received BRAFTOVI in combination with binimetinib were:

Nervous system disorders: *Facial paresis*

Gastrointestinal disorders: *Pancreatitis*

Skin and subcutaneous tissue disorders: *Panniculitis*

Immune system disorders: *Drug hypersensitivity*

Table 6: Laboratory Abnormalities Occurring in ≥10% (All Grades) of Patients Receiving BRAFTOVI in Combination With Binimetinib in COLUMBUS*

Laboratory Abnormality	BRAFTOVI with binimetinib* N=192		Vemurafenib* N=186	
	All Grades (%)	Grades 3 and 4 (%)	All Grades (%)	Grades 3 and 4 (%)
Hematology				
Anemia	36	3.6	34	2.2
Leukopenia	13	0	10	0.5
Lymphopenia	13	2.1	30	7
Neutropenia	13	3.1	4.8	0.5
Chemistry				
Increased Creatinine	93	3.6	92	1.1
Increased Gamma Glutamyl Transferase	45	11	34	4.8
Increased ALT	29	6	27	2.2
Increased AST	27	2.6	24	1.6
Hyperglycemia	28	5	20	2.7
Increased Alkaline Phosphatase	21	0.5	35	2.2
Hyponatremia	18	3.6	15	0.5
Hypermagnesemia	10	1.0	26	0.5

* Grades per National Cancer Institute CTCAE v4.03.

BRAF V600E Mutation-Positive Metastatic Colorectal Cancer (CRC)

The safety of BRAFTOVI 300 mg once daily in combination with cetuximab (400 mg/m^2 initial dose, followed by 250 mg/m^2 weekly) was evaluated in 216 patients with BRAF V600E mutation-positive metastatic CRC in a randomized, open-label, active-controlled trial (BEACON CRC). The BEACON CRC trial *[see Clinical Studies (14.2)]* excluded patients with a history of Gilbert's syndrome, abnormal left ventricular ejection fraction, prolonged QTc (>480 ms), uncontrolled hypertension, and history or current evidence of retinal vein occlusion. The median duration of exposure was 4.4 months for patients treated with BRAFTOVI in combination with cetuximab and 1.6 months for patients treated with either irinotecan or infusional 5-fluorouracil (5-FU)/folinic acid (FA)/irinotecan (FOLFIRI) in combination with cetuximab.

The most common (≥25%) adverse reactions in patients receiving BRAFTOVI in combination with cetuximab were fatigue, nausea, diarrhea, dermatitis acneiform, abdominal pain, decreased appetite, arthralgia, and rash.

Adverse reactions leading to dose interruptions of BRAFTOVI occurred in 33% of patients receiving BRAFTOVI in combination with cetuximab; the most common were vomiting (4%), fatigue (4%), nausea (4%), pyrexia (3%), and diarrhea (3%). Adverse reactions leading to dose reductions of BRAFTOVI occurred in 9% of patients receiving BRAFTOVI in combination with cetuximab; the most common were fatigue (2%), arthralgia (2%), and peripheral neuropathy (2%). Ten percent (10%) of patients receiving BRAFTOVI in combination with cetuximab experienced an adverse reaction that resulted in permanent discontinuation of BRAFTOVI. None of the adverse reactions leading to permanent discontinuation of BRAFTOVI occurred in more than one patient (>0.5%).

Table 7 and Table 8 present adverse drug reactions and laboratory abnormalities, respectively, identified in BEACON CRC.

Table 7: Adverse Reactions Occurring in ≥10% of Patients Receiving BRAFTOVI in Combination With Cetuximab in BEACON CRC*

Adverse Reaction	BRAFTOVI with cetuximab N=216		Irinotecan with cetuximab or FOLFIRI with cetuximab N=193	
	All Grades (%)	≥ Grade 3† (%)	All Grades (%)	≥ Grade 3 (%)
General Disorders and Administration Site Conditions				
Fatigue‡	51	7	50	8
Pyrexia‡	17	1	15	1
Gastrointestinal Disorders				
Nausea	34	1	41	1
Diarrhea‡	33	2	48	10
Abdominal pain‡	30	4	32	5
Vomiting	21	1	29	3
Constipation	15	0	18	1
Metabolism and Nutrition Disorders				
Decreased appetite	27	1	27	3
Musculoskeletal and Connective Tissue Disorders				
Arthralgia‡	27	1	3	0
Myopathy‡	15	1	4	0
Pain in extremity	10	0	1	0
Skin and Subcutaneous Tissue Disorders				
Dermatitis acneiform‡	32	1	43	3
Rash‡	26	0	26	2
Pruritus‡	14	0	6	0
Melanocytic nevus	14	0	0	0
Dry skin‡	13	0	12	1
Nervous System Disorders				
Headache‡	20	0	3	0
Peripheral neuropathy‡	12	1	6	0
Vascular Disorders				
Hemorrhage‡	19	2	9	0
Psychiatric Disorders				
Insomnia‡	13	0	6	0

* Grades per National Cancer Institute CTCAE v4.03.

† Grade 4–5 adverse reactions in the BRAFTOVI with cetuximab arm were limited to Grade 5 hemorrhage (n=1).
‡ Represents a composite of multiple, related preferred terms.

Other clinically important adverse reactions occurring in <10% of patients who received BRAFTOVI in combination with cetuximab were:

Gastrointestinal disorders: *Pancreatitis*

Table 8: Laboratory Abnormalities Occurring in ≥10% (All Grades) of Patients Receiving BRAFTOVI in Combination With Cetuximab in BEACON CRC*

Laboratory Abnormality†	BRAFTOVI with cetuximab		Irinotecan with cetuximab or FOLFIRI with cetuximab	
	All Grades (%)	Grades 3 and 4 (%)	All Grades (%)	Grades 3 and 4 (%)
Hematology				
Anemia	34	4	48	5
Lymphopenia	24	7	35	5
Increased Activated Partial Thromboplastin Time	13	1	7	1
Chemistry				
Hypomagnesemia	19	0	22	1
Increased Alkaline Phosphatase	18	4	30	7
Increased ALT	17	0	29	3
Increased AST	15	1	22	2
Hypokalemia	12	3	32	5
Hyponatremia	11	2	13	2

* Grades per National Cancer Institute CTCAE v4.03.
† Based on the number of patients with available baseline and at least one on-treatment laboratory test.

7 DRUG INTERACTIONS

7.1 Effect of Other Drugs on BRAFTOVI

Strong or Moderate CYP3A4 Inhibitors

Coadministration of BRAFTOVI with a strong or moderate CYP3A4 inhibitor increases encorafenib plasma concentrations *[see Clinical Pharmacology (12.3)]* and may increase encorafenib adverse reactions. Avoid coadministration of BRAFTOVI with strong or moderate CYP3A4 inhibitors, including grapefruit juice. If coadministration is unavoidable, reduce the BRAFTOVI dose *[see Dosage and Administration (2.6)]*.

Strong or Moderate CYP3A4 Inducers

Coadministration of BRAFTOVI with a strong or moderate CYP3A4 inducer may decrease encorafenib plasma concentrations *[see Clinical Pharmacology (12.3)]* and may decrease encorafenib efficacy. Avoid coadministration of BRAFTOVI with strong or moderate CYP3A4 inducers.

7.2 Effect of BRAFTOVI on Other Drugs

Sensitive CYP3A4 Substrates

Coadministration of BRAFTOVI with sensitive CYP3A4 substrates may increase adverse reactions or decrease efficacy of these agents.

Coadministration of BRAFTOVI with hormonal contraceptives (CYP3A4 substrates) can result in decreased concentrations and loss of hormonal contraceptive efficacy. Avoid coadministration of BRAFTOVI with hormonal contraceptives *[see Use in Specific Populations (8.3)]*.

OATP1B1, OATP1B3, or BCRP Substrates

Coadministration of BRAFTOVI with OATP1B1, OATP1B3, or BCRP substrates can result in increased concentrations of the substrates, and may increase toxicity of these agents. When used in combination, monitor patients closely for signs and symptoms of increased exposure and consider adjusting the dose of these substrates *[see Clinical Pharmacology (12.3)]*.

7.3 Drugs That Prolong the QT Interval

BRAFTOVI is associated with dose-dependent QTc interval prolongation *[see Warnings and Precautions (5.5), Clinical Pharmacology (12.2)]*. Avoid coadministration of BRAFTOVI with drugs known to prolong the QT/QTc interval.

8 USE IN SPECIFIC POPULATIONS

8.1 Pregnancy

Risk Summary

Based on its mechanism of action, BRAFTOVI can cause fetal harm when administered to a pregnant woman *[see Clinical Pharmacology (12.1)]*. There are no available clinical data on the use of BRAFTOVI during pregnancy. In animal reproduction studies, encorafenib produced embryo-fetal developmental changes in rats and rabbits and was an abortifacient in rabbits at doses greater than or equal to those resulting in exposures approximately 26 (in the rat) and 178 (in the rabbit) times the human exposure at the clinical dose of 450 mg, with no clear findings at lower doses *(see Data)*. Advise pregnant women of the potential risk to a fetus.

In the U.S. general population, the estimated background risk of major birth defects and miscarriage in clinically recognized pregnancies is 2% to 4% and 15% to 20%, respectively.

Data

Animal Data

In reproductive toxicity studies, administration of encorafenib to rats during the period of organogenesis resulted in maternal toxicity, decreased fetal weights, and increased incidence of total skeletal variations at a dose of 20 mg/kg/day (approximately 26 times the human exposure based on area under the concentration-time curve [AUC] at the recommended clinical dose of 450 mg once daily). In pregnant rabbits, administration of encorafenib during the period of organogenesis resulted in maternal toxicity, decreased fetal body weights, increased incidence of total skeletal variations and increased post-implantation loss, including total loss of pregnancy at a dose of 75 mg/kg/day (approximately 178 times the human exposure based on AUC at the recommended clinical dose of 450 mg once daily). While formal placental transfer studies have not been performed, encorafenib exposure in the fetal plasma of both rats and rabbits was up to 1.7% and 0.8%, respectively, of maternal exposure.

8.2 Lactation

Risk Summary

There are no data on the presence of encorafenib or its metabolites in human milk or the effects of encorafenib on the breastfed infant, or on milk production. Because of the potential for serious adverse reactions from BRAFTOVI in breastfed infants, advise women not to breastfeed during treatment with BRAFTOVI and for 2 weeks after the final dose.

8.3 Females and Males of Reproductive Potential

Pregnancy Testing

Verify the pregnancy status of females of reproductive potential prior to initiating BRAFTOVI *[see Use in Specific Populations (8.1)]*.

Contraception

BRAFTOVI can cause fetal harm when administered to a pregnant woman *[see Use in Specific Populations (8.1)]*.

Females

Advise females of reproductive potential to use effective contraception during treatment with BRAFTOVI and for 2 weeks after the final dose. Counsel patients to use a non-hormonal method of contraception since BRAFTOVI has the potential to render hormonal contraceptives ineffective *[see Drug Interactions (7.2)]*.

Infertility

Males

Based on findings in male rats at doses approximately 13 times the human exposure at the 450 mg clinical dose, use of BRAFTOVI may impact fertility in males *[see Nonclinical Toxicology (13.1)]*.

8.4 Pediatric Use

The safety and effectiveness of BRAFTOVI have not been established in pediatric patients.

8.5 Geriatric Use

Of the 690 patients with BRAF mutation-positive melanoma who received BRAFTOVI at doses between 300 mg and 600 mg once daily in combination with binimetinib (45 mg twice daily) across multiple clinical trials, 20% were aged 65 to 74 years and 8% were aged 75 years and older *[see Clinical Studies (14.1)]*.

Of the 216 patients with BRAF V600E mutation positive metastatic CRC who received BRAFTOVI 300 mg QD in combination with cetuximab, 62 (29%) were 65 years of age to up to 75 years of age, while 20 (9%) were 75 years of age and over *[see Clinical Studies (14.2)]*.

No overall differences in the safety or effectiveness of BRAFTOVI plus binimetinib or BRAFTOVI plus cetuximab were observed in elderly patients as compared to younger patients.

8.6 Hepatic Impairment

No BRAFTOVI dosage adjustment is recommended in patients with mild hepatic impairment (Child-Pugh Class A) *[see Clinical Pharmacology (12.3)]*. A recommended dosage has not been established in patients with moderate (Child-Pugh Class B) or severe (Child-Pugh Class C) hepatic impairment.

8.7 Renal Impairment

No BRAFTOVI dosage adjustment is recommended in patients with mild to moderate renal impairment (CLcr 30 to <90 mL/min) *[see Clinical Pharmacology (12.3)]*. A recommended dosage has not been established in patients with severe renal impairment (CLcr <30 mL/min).

10 OVERDOSAGE

Since encorafenib is 86% bound to plasma proteins, hemodialysis is likely to be ineffective in the treatment of overdose with BRAFTOVI.

11 DESCRIPTION

Encorafenib is a kinase inhibitor. The chemical name is methyl *N*-{(2*S*)-1-[(4-{3-[5-chloro-2-fluoro-3-(methanesulfonamido)phenyl]-1-(propan-2-yl)-1*H*-pyrazol-4-yl}pyrimidin-2-yl)amino]propan-2-yl} carbamate. The molecular formula is $C_{22}H_{27}ClFN_7O_4S$ and the molecular weight is 540 daltons. The chemical structure of encorafenib is shown below:

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