

## HIGHLIGHTS OF PRESCRIBING INFORMATION

These highlights do not include all the information needed to use JEVTANA safely and effectively. See full prescribing information for JEVTANA.

JEVTANA® (cabazitaxel) injection, for intravenous use

Initial U.S. Approval: 2010

### WARNING: NEUTROPENIA AND HYPERSENSITIVITY

See full prescribing information for complete boxed warning.

- Neutropenic deaths have been reported. Obtain frequent blood counts to monitor for neutropenia. Do not give JEVTANA if neutrophil counts are  $\leq 1,500$  cells/mm<sup>3</sup>. (2.2)(4)
- Severe hypersensitivity can occur and may include generalized rash/erythema, hypotension and bronchospasm. Discontinue JEVTANA immediately if severe reactions occur and administer appropriate therapy. (2.1)(5.2)
- Contraindicated if history of severe hypersensitivity reactions to JEVTANA or to drugs formulated with polysorbate 80. (4)

## RECENT MAJOR CHANGES

Warnings and Precautions (5.5)

09/2016

## INDICATIONS AND USAGE

JEVTANA is a microtubule inhibitor indicated in combination with prednisone for treatment of patients with hormone-refractory metastatic prostate cancer previously treated with a docetaxel-containing treatment regimen. (1)

## DOSAGE AND ADMINISTRATION

**Recommended Dose:** JEVTANA 25 mg/m<sup>2</sup> administered every three weeks as a one-hour intravenous infusion in combination with oral prednisone 10 mg administered daily throughout JEVTANA treatment. (2.1)

- JEVTANA requires **two** dilutions prior to administration (2.5)
- Use the **entire contents** of the accompanying diluent to achieve a concentration of 10 mg/mL JEVTANA. (2.5)
- PVC equipment should not be used (2.5)
- **Premedication Regimen:** Administer intravenously 30 minutes before each dose of JEVTANA:
  - Antihistamine (dexchlorpheniramine 5 mg or diphenhydramine 25 mg or equivalent antihistamine)
  - Corticosteroid (dexamethasone 8 mg or equivalent steroid)
  - H<sub>2</sub> antagonist (ranitidine 50 mg or equivalent H<sub>2</sub> antagonist) (2.1)Antiemetic prophylaxis (oral or intravenous) is recommended as needed. (2.1)
- **Dosage Modifications:** See full prescribing information (2.2, 2.3, 2.4)

## DOSAGE FORMS AND STRENGTHS

- Single dose vial 60 mg/1.5 mL, supplied with diluent (5.7 mL) for JEVTANA (3)

## CONTRAINDICATIONS

- Neutrophil counts of  $\leq 1,500$ /mm<sup>3</sup> (2.2)(4)
- History of severe hypersensitivity to JEVTANA or polysorbate 80 (4)
- Severe hepatic impairment (Total Bilirubin  $>3 \times$  ULN) (4)

## WARNINGS AND PRECAUTIONS

- Bone marrow suppression (particularly neutropenia) and its clinical consequences (febrile neutropenia, neutropenic infections): Monitor blood counts frequently to determine if dosage modification or initiation of G-CSF is needed. Primary prophylaxis with G-CSF should be considered in patients with high-risk clinical features. Use caution in patients with hemoglobin  $<10$  g/dL. (2.2)(4)(5.1)
- Hypersensitivity: Severe hypersensitivity reactions can occur. Premedicate with corticosteroids and H<sub>2</sub> antagonists. Discontinue infusion immediately if hypersensitivity is observed and treat as indicated. (4)(5.2)
- Gastrointestinal disorders: Nausea, vomiting, and diarrhea may occur. Mortality related to diarrhea has been reported. Rehydrate and treat with anti-emetics and anti-diarrheals as needed. If experiencing Grade  $\geq 3$  diarrhea, dosage should be modified. (2.2) Deaths have occurred due to gastrointestinal hemorrhage, perforation and neutropenic enterocolitis. Delay or discontinue JEVTANA. (5.3)
- Renal failure, including cases with fatal outcomes, has been reported. Identify cause and manage aggressively. (5.4)
- Respiratory disorders: Interstitial pneumonia/pneumonitis, interstitial lung disease and acute respiratory distress syndrome, including fatal outcomes, have been reported. Delay or discontinue JEVTANA and treat as indicated. (5.5)
- Elderly patients: Patients  $\geq 65$  years of age were more likely to experience fatal outcomes not related to disease progression and certain adverse reactions, including neutropenia and febrile neutropenia. Monitor closely. (5.6)(6)(8.5)
- Hepatic impairment: Reduce the JEVTANA dose to 20 mg/m<sup>2</sup> in patients with mild hepatic impairment and to 15 mg/m<sup>2</sup> in patients with moderate hepatic impairment. (2.3)
- JEVTANA can cause fetal harm when administered to a pregnant woman. (5.8)(8.1)

## ADVERSE REACTIONS

Most common all grades adverse reactions ( $\geq 10\%$ ) are neutropenia, anemia, leukopenia, thrombocytopenia, diarrhea, fatigue, nausea, vomiting, constipation, asthenia, abdominal pain, hematuria, back pain, anorexia, peripheral neuropathy, pyrexia, dyspnea, dysgeusia, cough, arthralgia, and alopecia. (6)

To report SUSPECTED ADVERSE REACTIONS, contact sanofi-aventis U.S. LLC at 1-800-633-1610 or FDA at 1-800-FDA-1088 or [www.fda.gov/medwatch](http://www.fda.gov/medwatch).

## DRUG INTERACTIONS

Avoid coadministration of JEVTANA with strong CYP3A inhibitors. If patients require coadministration of a strong CYP3A inhibitor, consider a 25% JEVTANA dose reduction. (2.4)(7.1)(12.3)

See 17 for PATIENT COUNSELING INFORMATION and FDA-approved patient labeling

Revised: 05/2017

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FULL PRESCRIBING INFORMATION

**WARNING: NEUTROPENIA AND HYPERSENSITIVITY**

**Neutropenia:** Neutropenic deaths have been reported. In order to monitor the occurrence of neutropenia, frequent blood cell counts should be performed on all patients receiving JEVTANA. JEVTANA is contraindicated in patients with neutrophil counts of  $\leq 1,500$  cells/mm<sup>3</sup> [see *Contraindications (4) and Warnings and Precautions (5.1)*].

**Severe hypersensitivity:** Severe hypersensitivity reactions can occur and may include generalized rash/erythema, hypotension and bronchospasm. Severe hypersensitivity reactions require immediate discontinuation of the JEVTANA infusion and administration of appropriate therapy. Patients should receive premedication. JEVTANA is contraindicated in patients who have a history of severe hypersensitivity reactions to cabazitaxel or to other drugs formulated with polysorbate 80 [see *Dosage and Administration (2.1), Contraindications (4), and Warnings and Precautions (5.2)*].

**1 INDICATIONS AND USAGE**

JEVTANA<sup>®</sup> is a microtubule inhibitor indicated in combination with prednisone for the treatment of patients with hormone-refractory metastatic prostate cancer previously treated with a docetaxel-containing treatment regimen.

**2 DOSAGE AND ADMINISTRATION**

**2.1 Dosing Information**

The individual dosage of JEVTANA is based on calculation of the Body Surface Area (BSA) and is 25 mg/m<sup>2</sup> administered as a one-hour intravenous infusion every three weeks in combination with oral prednisone 10 mg administered daily throughout JEVTANA treatment.

Premedicate at least 30 minutes prior to each dose of JEVTANA with the following intravenous medications to reduce the risk and/or severity of hypersensitivity [see *Warnings and Precautions (5.2)*]:

- antihistamine (dexchlorpheniramine 5 mg, or diphenhydramine 25 mg or equivalent antihistamine),
- corticosteroid (dexamethasone 8 mg or equivalent steroid),
- H<sub>2</sub> antagonist (ranitidine 50 mg or equivalent H<sub>2</sub> antagonist).

Antiemetic prophylaxis is recommended and can be given orally or intravenously as needed [see *Warnings and Precautions 5.3*].

JEVTANA injection single-use vial requires **two** dilutions prior to administration [see *Dosage and Administration (2.5)*].

**2.2 Dose Modifications for Adverse Reactions**

Reduce or discontinue JEVTANA dosing for adverse reactions as described in Table 1.

**Table 1: Recommended Dosage Modifications for Adverse Reactions in Patients Treated with JEVTANA**

Toxicity	Dosage Modification
Prolonged grade $\geq 3$ neutropenia (greater than 1 week) despite appropriate medication including granulocyte-colony stimulating factor (G-CSF)	Delay treatment until neutrophil count is $>1,500$ cells/mm <sup>3</sup> , then reduce dosage of JEVTANA to 20 mg/m <sup>2</sup> . Use G-CSF for secondary prophylaxis.
Febrile neutropenia or neutropenic infection	Delay treatment until improvement or resolution, and until neutrophil count is $>1,500$ cells/mm <sup>3</sup> , then reduce dosage of JEVTANA to 20 mg/m <sup>2</sup> . Use G-CSF for secondary prophylaxis.
Grade $\geq 3$ diarrhea or persisting diarrhea despite appropriate medication, fluid and electrolyte replacement	Delay treatment until improvement or resolution, then reduce dosage of JEVTANA to 20 mg/m <sup>2</sup> .
Grade 2 peripheral neuropathy	Delay treatment until improvement or resolution, then reduce dosage of JEVTANA to 20 mg/m <sup>2</sup> .
Grade $\geq 3$ peripheral neuropathy	Discontinue JEVTANA

Discontinue JEVTANA treatment if a patient continues to experience any of these reactions at the 20 mg/m<sup>2</sup> dosage.

**2.3 Dose Modifications for Hepatic Impairment**

- Mild hepatic impairment (total bilirubin  $>1$  to  $\leq 1.5 \times$  Upper Limit of Normal (ULN) or AST  $>1.5 \times$  ULN): Reduce JEVTANA starting dose to 20 mg/m<sup>2</sup>.
- Moderate hepatic impairment (total bilirubin  $>1.5$  to  $\leq 3 \times$  ULN and AST = any): Reduce JEVTANA starting dose to 15 mg/m<sup>2</sup> based on tolerability data in these patients; however, the efficacy of this dose is unknown.
- Severe hepatic impairment (total bilirubin  $>3 \times$  ULN): JEVTANA is contraindicated in patients with severe hepatic impairment [see *Warning and Precautions (5.7) and Clinical Pharmacology (12.3)*].

**2.4 Dose Modifications for Use with Strong CYP3A Inhibitors**

Concomitant drugs that are strong CYP3A inhibitors (e.g., ketoconazole, itraconazole, clarithromycin, atazanavir, indinavir, nefazodone, nelfinavir, ritonavir, saquinavir, telithromycin, voriconazole) may increase plasma concentrations of cabazitaxel. Avoid the coadministration of JEVTANA with these drugs. If patients require coadministration of a strong CYP3A inhibitor, consider a 25% JEVTANA dose reduction [see *Drug Interactions (7.1) and Clinical Pharmacology (12.3)*].

**2.5 Preparation and Administration**

JEVTANA is a cytotoxic anticancer drug. Follow applicable special handling and disposal procedures [see *References (15)*]. If JEVTANA first diluted solution, or second (final) dilution for intravenous infusion should come into contact with the skin or mucous, immediately and thoroughly wash with soap and water.

Do not use PVC infusion containers or polyurethane infusions sets for preparation and administration of JEVTANA infusion solution.

JEVTANA should not be mixed with any other drugs.

**Preparation**

Read this **entire** section carefully before mixing and diluting. JEVTANA requires **two** dilutions prior to administration. Follow the preparation instructions provided below, as improper preparation may lead to overdose [see *Overdosage (10)*].

**Note:** Both the JEVTANA injection and the diluent vials contain an overflow to compensate for liquid loss during preparation. This overflow ensures that after dilution with the **entire contents** of the accompanying diluent, there is an initial diluted solution containing 10 mg/mL JEVTANA.

Inspect the JEVTANA injection and supplied diluent vials. The JEVTANA injection is a clear yellow to brownish-yellow viscous solution.

**Step 1 – First Dilution**

Each vial of JEVTANA (cabazitaxel) 60 mg/1.5 mL must first be mixed with the **entire contents** of supplied diluent. Once reconstituted, the resultant solution contains 10 mg/mL of JEVTANA.

When transferring the diluent, direct the needle onto the inside wall of JEVTANA vial and inject slowly to limit foaming. Remove the syringe and needle and gently mix the initial diluted solution by repeated inversions for at least 45 seconds to assure full mixing of the drug and diluent. Do not shake.

Let the solution stand for a few minutes to allow any foam to dissipate, and check that the solution is homogeneous and contains no visible particulate matter. It is not required that all foam dissipate prior to continuing the preparation process.

The resulting initial diluted JEVTANA solution (cabazitaxel 10 mg/mL) requires further dilution before administration. The second dilution should be done immediately (within 30 minutes) to obtain the final infusion as detailed in Step 2.

**Step 2 – Second (Final) Dilution**

Withdraw the recommended dose from the JEVTANA solution containing 10 mg/mL as prepared in Step 1 using a calibrated syringe and further dilute into a sterile 250 mL PVC-free container of either 0.9% sodium chloride solution or 5% dextrose solution for infusion. If a dose greater than 65 mg of JEVTANA is required, use a larger volume of the infusion vehicle so that a concentration of 0.26 mg/mL JEVTANA is not exceeded. The concentration of the JEVTANA final infusion solution should be between 0.10 mg/mL and 0.26 mg/mL.

Remove the syringe and thoroughly mix the final infusion solution by gently inverting the bag or bottle. As the final infusion solution is supersaturated, it may crystallize over time. Do not use if this occurs and discard.

Fully prepared JEVTANA infusion solution (in either 0.9% sodium chloride solution or 5% dextrose solution) should be used within 8 hours at ambient temperature (including the one-hour infusion), or for a total of 24 hours (including the one-hour infusion) under the refrigerated conditions.

Discard any unused portion.

**Administration**

Inspect visually for particulate matter, any crystals and discoloration prior to administration. If the JEVTANA first diluted solution or second (final) infusion solution is not clear or appears to have precipitation, it should be discarded.

Use an in-line filter of 0.22 micrometer nominal pore size (also referred to as 0.2 micrometer) during administration.

The final JEVTANA infusion solution should be administered intravenously as a one-hour infusion at room temperature.

**3 DOSAGE FORMS AND STRENGTHS**

JEVTANA (cabazitaxel) injection is supplied as a kit consisting of the following:

- Cabazitaxel injection: 60 mg/1.5 mL; a clear yellow to brownish-yellow viscous solution
- Diluent: 5.7 mL of 13% (w/w) ethanol in water; a clear colorless solution

**4 CONTRAINDICATIONS**

JEVTANA is contraindicated in patients with:

- neutrophil counts of  $\leq 1,500$ /mm<sup>3</sup> [see *Warnings and Precautions (5.1)*]
- history of severe hypersensitivity reactions to cabazitaxel or to other drugs formulated with polysorbate 80 [see *Warnings and Precautions (5.2)*]
- severe hepatic impairment (total bilirubin  $>3 \times$  ULN) [see *Warnings and Precautions (5.7)*]

**5 WARNINGS AND PRECAUTIONS**

**5.1 Bone Marrow Suppression**

Bone marrow suppression manifested as neutropenia, anemia, thrombocytopenia and/or pancytopenia may occur. Neutropenic deaths have been reported. In the randomized trial, five patients (1.3%) experienced fatal infectious adverse events (sepsis or septic shock). All had grade 4 neutropenia and one had febrile neutropenia. One additional patient's death was attributed to neutropenia without a documented infection. Grade 3–4 neutropenia has been observed in 82% of patients treated with JEVTANA in the randomized trial.

G-CSF may be administered to reduce the risks of neutropenia complications associated with JEVTANA use. Primary prophylaxis with G-CSF should be considered in patients with high-risk clinical features (age  $>65$  years, poor performance status, previous episodes of febrile neutropenia, extensive prior radiation ports, poor nutritional status, or other serious comorbidities) that predispose them to increased complications from prolonged neutropenia. Therapeutic use of G-CSF and secondary prophylaxis should be considered in all patients considered to be at increased risk for neutropenia complications.

Monitoring of complete blood counts is essential on a weekly basis during cycle 1 and before each treatment cycle thereafter so that the dose can be adjusted, if needed [see *Dosage and Administration (2.2)*].

JEVTANA is contraindicated in patients with neutrophils  $\leq 1,500$ /mm<sup>3</sup> [see *Contraindications (4)*].

Caution is recommended in patients with hemoglobin  $<10$  g/dL.

**5.2 Hypersensitivity Reactions**

Hypersensitivity reactions may occur within a few minutes following the initiation of the infusion of JEVTANA, thus facilities and equipment for the treatment of hypotension and bronchospasm should be available. Severe hypersensitivity reactions can occur and may include generalized rash/erythema, hypotension and bronchospasm.

Premedicate all patients prior to the initiation of the infusion of JEVTANA [see *Dosage and Administration (2.1)*]. Observe patients closely for hypersensitivity reactions, especially during the first and second infusions. Severe hypersensitivity reactions require immediate discontinuation of the JEVTANA infusion and appropriate therapy. JEVTANA is contraindicated in patients with a history of severe hypersensitivity reactions to cabazitaxel or to other drugs formulated with polysorbate 80 [see *Contraindications (4)*].

**5.3 Gastrointestinal Adverse Reactions**

Nausea, vomiting and severe diarrhea, at times, may occur. Death related to diarrhea and electrolyte imbalance occurred in the randomized clinical trial. Intensive measures may be required for severe diarrhea and electrolyte imbalance. Antiemetic prophylaxis is recommended. Treat patients with

rehydration, anti-diarrheal or anti-emetic medications as needed. Treatment delay or dosage reduction may be necessary if patients experience Grade  $\geq 3$  diarrhea [see *Dosage and Administration* (2.2)]. Gastrointestinal (GI) hemorrhage and perforation, ileus, enterocolitis, neutropenic enterocolitis, including fatal outcome, have been reported in patients treated with JEV TANA [see *Adverse Reactions* (6.2)]. Risk may be increased with neutropenia, age, steroid use, concomitant use of NSAIDs, anti-platelet therapy or anti-coagulants, and patients with a prior history of pelvic radiotherapy, adhesions, ulceration and GI bleeding.

Abdominal pain and tenderness, fever, persistent constipation, diarrhea, with or without neutropenia, may be early manifestations of serious gastrointestinal toxicity and should be evaluated and treated promptly. JEV TANA treatment delay or discontinuation may be necessary.

#### 5.4 Renal Failure

In the randomized clinical trial, renal failure of any grade occurred in 4% of the patients being treated with JEV TANA, including four cases with fatal outcome. Most cases occurred in association with sepsis, dehydration, or obstructive uropathy [see *Adverse Reactions* (6.1)]. Some deaths due to renal failure did not have a clear etiology. Appropriate measures should be taken to identify causes of renal failure and treat aggressively.

#### 5.5 Respiratory Disorders

Interstitial pneumonia/pneumonitis, interstitial lung disease and acute respiratory distress syndrome have been reported and may be associated with fatal outcome [see *Adverse Reactions* (6.2)]. Patients with underlying lung disease may be at higher risk for these events. Acute respiratory distress syndrome may occur in the setting of infection.

Interrupt JEV TANA if new or worsening pulmonary symptoms develop. Closely monitor, promptly investigate, and appropriately treat patients receiving JEV TANA. Consider discontinuation. The benefit of resuming JEV TANA treatment must be carefully evaluated.

#### 5.6 Use in Elderly Patients

In the randomized clinical trial, 3 of 131 (2%) patients <65 years of age and 15 of 240 (6%)  $\geq 65$  years of age died of causes other than disease progression within 30 days of the last cabazitaxel dose. Patients  $\geq 65$  years of age are more likely to experience certain adverse reactions, including neutropenia and febrile neutropenia [see *Adverse Reactions* (6) and *Use in Specific Populations* (8.5)].

#### 5.7 Use in Patients with Hepatic Impairment

Cabazitaxel is extensively metabolized in the liver.

JEV TANA is contraindicated in patients with severe hepatic impairment (total bilirubin  $>3 \times$  ULN) [see *Contraindications* (4)]. Dose should be reduced for patients with mild (total bilirubin  $>1$  to  $\leq 1.5 \times$  ULN or AST  $>1.5 \times$  ULN) and moderate (total bilirubin  $>1.5$  to  $\leq 3.0 \times$  ULN and any AST) hepatic impairment, based on tolerability data in these patients [see *Dosage and Administration* (2.3) and *Use in Specific Populations* (8.7)]. Administration of cabazitaxel to patients with mild and moderate hepatic impairment should be undertaken with caution and close monitoring of safety.

#### 5.8 Embryo-Fetal Toxicity

JEV TANA is not indicated for use in female patients.

JEV TANA can cause fetal harm when administered to a pregnant woman. In non-clinical studies in rats and rabbits, cabazitaxel was embryotoxic, fetotoxic, and abortifacient at exposures significantly lower than those expected at the recommended human dose level.

There are no adequate and well-controlled studies in pregnant women using JEV TANA. If this drug is used during pregnancy, or if the patient becomes pregnant while taking this drug, the patient should be apprised of the potential hazard to the fetus. Females of childbearing potential should be advised to avoid becoming pregnant during treatment with JEV TANA [see *Use in Specific Populations* (8.1)].

## 6 ADVERSE REACTIONS

The following serious adverse reactions are discussed in greater detail in another section of the label:

- Bone Marrow Suppression [see *Warnings and Precautions* (5.1)].
- Hypersensitivity Reactions [see *Warnings and Precautions* (5.2)].
- Gastrointestinal Adverse Reactions [see *Warnings and Precautions* (5.3)].
- Renal Failure [see *Warnings and Precautions* (5.4)].
- Respiratory Disorders [see *Warnings and Precautions* (5.5)].
- Use in Elderly Patients [see *Warnings and Precautions* (5.6)].
- Use in Patients with Hepatic Impairment [see *Warnings and Precautions* (5.7)].
- Embryo-Fetal Toxicity [see *Warnings and Precautions* (5.8)].

### 6.1 Clinical Trials Experience

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

The safety of JEV TANA in combination with prednisone was evaluated in 371 patients with hormone-refractory metastatic prostate cancer treated in a single randomized trial, compared to mitoxantrone plus prednisone.

Deaths due to causes other than disease progression within 30 days of last study drug dose were reported in 18 (5%) JEV TANA-treated patients and 3 (<1%) mitoxantrone-treated patients. The most common fatal adverse reactions in JEV TANA-treated patients were infections (n=5) and renal failure (n=4). The majority (4 of 5 patients) of fatal infection-related adverse reactions occurred after a single dose of JEV TANA. Other fatal adverse reactions in JEV TANA-treated patients included ventricular fibrillation, cerebral hemorrhage, and dyspnea.

The most common ( $\geq 10\%$ ) grade 1–4 adverse reactions were anemia, leukopenia, neutropenia, thrombocytopenia, diarrhea, fatigue, nausea, vomiting, constipation, asthenia, abdominal pain, hematuria, back pain, anorexia, peripheral neuropathy, pyrexia, dyspnea, dysgeusia, cough, arthralgia, and alopecia.

The most common ( $\geq 5\%$ ) grade 3–4 adverse reactions in patients who received JEV TANA were neutropenia, leukopenia, anemia, febrile neutropenia, diarrhea, fatigue, and asthenia.

Treatment discontinuations due to adverse drug reactions occurred in 18% of patients who received JEV TANA and 8% of patients who received mitoxantrone. The most common adverse reactions leading to treatment discontinuation in the JEV TANA group were neutropenia and renal failure. Dose reductions were reported in 12% of JEV TANA-treated patients and 4% of mitoxantrone-treated patients. Dose delays were reported in 28% of JEV TANA-treated patients and 15% of mitoxantrone-treated patients.

**Table 2: Incidence of Reported Adverse Reactions\* and Hematologic Abnormalities in  $\geq 5\%$  of Patients Receiving JEV TANA in Combination with Prednisone or Mitoxantrone in Combination with Prednisone**

	JEV TANA 25 mg/m <sup>2</sup> every 3 weeks with prednisone 10 mg daily n=371		Mitoxantrone 12 mg/m <sup>2</sup> every 3 weeks with prednisone 10 mg daily n=371	
	Grade 1–4 n (%)	Grade 3–4 n (%)	Grade 1–4 n (%)	Grade 3–4 n (%)
<b>Any Adverse Reaction</b>				
<b>Blood and Lymphatic System Disorders</b>				
Neutropenia <sup>†</sup>	347 (94%)	303 (82%)	325 (87%)	215 (58%)
Febrile Neutropenia	27 (7%)	27 (7%)	5 (1%)	5 (1%)
Anemia <sup>†</sup>	361 (98%)	39 (11%)	302 (82%)	18 (5%)
Leukopenia <sup>†</sup>	355 (96%)	253 (69%)	343 (93%)	157 (42%)
Thrombocytopenia <sup>†</sup>	176 (48%)	15 (4%)	160 (43%)	6 (2%)
<b>Cardiac Disorders</b>				
Arrhythmia <sup>‡</sup>	18 (5%)	4 (1%)	6 (2%)	1 (<1%)
<b>Gastrointestinal Disorders</b>				
Diarrhea	173 (47%)	23 (6%)	39 (11%)	1 (<1%)
Nausea	127 (34%)	7 (2%)	85 (23%)	1 (<1%)
Vomiting	83 (22%)	6 (2%)	38 (10%)	0
Constipation	76 (20%)	4 (1%)	57 (15%)	2 (<1%)
Abdominal Pain <sup>§</sup>	64 (17%)	7 (2%)	23 (6%)	0
Dyspepsia <sup>¶</sup>	36 (10%)	0	9 (2%)	0
<b>General Disorders and Administration Site Conditions</b>				
Fatigue	136 (37%)	18 (5%)	102 (27%)	11 (3%)
Asthenia	76 (20%)	17 (5%)	46 (12%)	9 (2%)
Pyrexia	45 (12%)	4 (1%)	23 (6%)	1 (<1%)
Peripheral Edema	34 (9%)	2 (<1%)	34 (9%)	2 (<1%)
Mucosal Inflammation	22 (6%)	1 (<1%)	10 (3%)	1 (<1%)
Pain	20 (5%)	4 (1%)	18 (5%)	7 (2%)
<b>Infections and Infestations</b>				
Urinary Tract Infection <sup>#</sup>	29 (8%)	6 (2%)	12 (3%)	4 (1%)
<b>Investigations</b>				
Weight Decreased	32 (9%)	0	28 (8%)	1 (<1%)
<b>Metabolism and Nutrition Disorders</b>				
Anorexia	59 (16%)	3 (<1%)	39 (11%)	3 (<1%)
Dehydration	18 (5%)	8 (2%)	10 (3%)	3 (<1%)
<b>Musculoskeletal and Connective Tissue Disorders</b>				
Back Pain	60 (16%)	14 (4%)	45 (12%)	11 (3%)
Arthralgia	39 (11%)	4 (1%)	31 (8%)	4 (1%)
Muscle Spasms	27 (7%)	0	10 (3%)	0
<b>Nervous System Disorders</b>				
Peripheral Neuropathy <sup>¶</sup>	50 (13%)	3 (<1%)	12 (3.2%)	3 (<1%)
Dysgeusia	41 (11%)	0	15 (4%)	0
Dizziness	30 (8%)	0	21 (6%)	2 (<1%)
Headache	28 (8%)	0	19 (5%)	0
<b>Renal and Urinary Tract Disorders</b>				
Hematuria	62 (17%)	7 (2%)	13 (4%)	1 (<1%)
Dysuria	25 (7%)	0	5 (1%)	0
<b>Respiratory, Thoracic and Mediastinal Disorders</b>				
Dyspnea	43 (12%)	4 (1%)	16 (4%)	2 (<1%)
Cough	40 (11%)	0	22 (6%)	0
<b>Skin and Subcutaneous Tissue Disorders</b>				
Alopecia	37 (10%)	0	18 (5%)	0
<b>Vascular Disorders</b>				
Hypotension	20 (5%)	2 (<1%)	9 (2%)	1 (<1%)
<b>Median Duration of Treatment</b>	6 cycles		4 cycles	

\*Graded using NCI CTCAE version 3

†Based on laboratory values, cabazitaxel: n = 369, mitoxantrone: n = 370.

‡Includes atrial fibrillation, atrial flutter, atrial tachycardia, atrioventricular block complete, bradycardia, palpitations, supraventricular tachycardia, tachyarrhythmia, and tachycardia.

§Includes abdominal discomfort, abdominal pain lower, abdominal pain upper, abdominal tenderness, and GI pain.

¶Includes gastroesophageal reflux disease and reflux gastritis.

#Includes urinary tract infection enterococcal and urinary tract infection fungal.

¶Includes peripheral motor neuropathy and peripheral sensory neuropathy.

#### Neutropenia and Associated Clinical Events:

Five patients experienced fatal infectious adverse events (sepsis or septic shock). All had grade 4 neutropenia and one had febrile neutropenia. One additional patient's death was attributed to neutropenia without a documented infection. Twenty-two (6%) patients discontinued JEV TANA treatment due to neutropenia, febrile neutropenia, infection, or sepsis. The most common adverse reaction leading to treatment discontinuation in the JEV TANA group was neutropenia (2%).

#### Hematuria:

Adverse events of hematuria, including those requiring medical intervention, were more common in JEV TANA-treated patients. The incidence of grade  $\geq 2$  hematuria was 6% in JEV TANA-treated patients and 2% in mitoxantrone-treated patients. Other factors associated with hematuria were well-balanced

between arms and do not account for the increased rate of hematuria on the JEVTANA arm.

#### Hepatic Laboratory Abnormalities:

The incidences of grade 3–4 increased AST, increased ALT, and increased bilirubin were each  $\leq 1\%$ .

#### Elderly Population:

The following grade 1–4 adverse reactions were reported at rates  $\geq 5\%$  higher in patients 65 years of age or greater compared to younger patients: fatigue (40% vs. 30%), neutropenia (97% vs. 89%), asthenia (24% vs. 15%), pyrexia (15% vs. 8%), dizziness (10% vs. 5%), urinary tract infection (10% vs. 3%) and dehydration (7% vs. 2%), respectively.

The incidence of the following grade 3–4 adverse reactions were higher in patients  $\geq 65$  years of age compared to younger patients; neutropenia (87% vs. 74%), and febrile neutropenia (8% vs. 6%) [see Use in Specific Populations (8.5)].

#### 6.2 Postmarketing Experience

The following adverse reactions have been identified from clinical trials and/or postmarketing surveillance. Because they are reported from a population of unknown size, precise estimates of frequency cannot be made.

Gastrointestinal: Gastritis, intestinal obstruction.

Respiratory: Interstitial pneumonia/pneumonitis, interstitial lung disease and acute respiratory distress syndrome.

#### 7 DRUG INTERACTIONS

##### 7.1 CYP3A Inhibitors

Cabazitaxel is primarily metabolized through CYP3A [see Clinical Pharmacology (12.3)]. Strong CYP3A inhibitors (e.g., ketoconazole, itraconazole, clarithromycin, atazanavir, indinavir, nefazodone, neflavin, ritonavir, saquinavir, telithromycin, voriconazole) may increase plasma concentrations of cabazitaxel. Avoid the coadministration of JEVTANA with strong CYP3A inhibitors. If patients require coadministration of a strong CYP3A inhibitor, consider a 25% JEVTANA dose reduction [see Dosage and Administration (2.4) and Clinical Pharmacology (12.3)].

#### 8 USE IN SPECIFIC POPULATIONS

##### 8.1 Pregnancy

Pregnancy category D. See Warnings and Precautions section.

JEVTANA is not indicated for use in female patients.

JEVTANA can cause fetal harm when administered to a pregnant woman. There are no adequate and well-controlled studies of JEVTANA in pregnant women.

Non-clinical studies in rats and rabbits have shown that cabazitaxel is embryotoxic, fetotoxic, and abortifacient. Cabazitaxel was shown to cross the placenta barrier within 24 hours of a single intravenous administration of a 0.08 mg/kg dose (approximately 0.02 times the maximum recommended human dose [MRHD]) to pregnant rats at gestational day 17.

Cabazitaxel administered once daily to female rats during organogenesis at a dose of 0.16 mg/kg/day (approximately 0.02–0.06 times the  $C_{max}$  in patients with cancer at the recommended human dose) caused maternal and embryofetal toxicity consisting of increased postimplantation loss, embryolethality, and fetal deaths. Decreased mean fetal birth weight associated with delays in skeletal ossification were observed at doses  $\geq 0.08$  mg/kg (approximately 0.02 times the  $C_{max}$  at the MRHD). *In utero* exposure to cabazitaxel did not result in fetal abnormalities in rats or rabbits at exposure levels significantly lower than the expected human exposures.

If this drug is used during pregnancy or if the patient becomes pregnant while taking this drug, the patient should be apprised of the potential hazard to the fetus. Women of childbearing potential should be advised to avoid becoming pregnant while taking JEVTANA.

##### 8.3 Nursing Mothers

JEVTANA is not indicated for use in female patients.

Cabazitaxel or cabazitaxel metabolites are excreted in maternal milk of lactating rats. It is not known whether this drug is excreted in human milk. Within 2 hours of a single intravenous administration of cabazitaxel to lactating rats at a dose of 0.08 mg/kg (approximately 0.02 times the maximum recommended human dose), radioactivity related to cabazitaxel was detected in the stomachs of nursing pups. This was detectable for up to 24 hours post dose. Approximately 1.5% of the dose delivered to the mother was calculated to be delivered in the maternal milk. Because many drugs are excreted in human milk and because of the potential for serious adverse reactions in nursing infants from JEVTANA, a decision should be made whether to discontinue nursing or to discontinue the drug, taking into account the importance of the drug to the mother.

##### 8.4 Pediatric Use

The safety and effectiveness of JEVTANA in pediatric patients have not been established. JEVTANA was evaluated in 39 pediatric patients (ages 3 to 18 years) receiving prophylactic G-CSF. The maximum tolerated dose (MTD) was 30 mg/m<sup>2</sup> intravenously over 1 hour on Day 1 of a 21-day cycle in pediatric patients with solid tumors based on the dose-limiting toxicity (DLT) of febrile neutropenia. No objective responses were observed in 11 patients with refractory high grade glioma (HGG) or diffuse intrinsic pontine glioma (DIPG). One patient had a partial response among the 9 patients with ependymoma.

Infusion-related/hypersensitivity reactions were seen in 10 patients (26%). Three patients experienced serious adverse events of anaphylactic reaction. The incidence of infusion related/hypersensitivity reactions decreased with steroid premedication. The most frequent treatment-emergent adverse events were similar to those reported in adults.

Based on the population pharmacokinetics analysis conducted with data from 31 pediatric patients with cancer (ages 3 to 18 years), the clearances by body surface area were comparable to those in adults.

##### 8.5 Geriatric Use

Of the 371 patients with prostate cancer treated with JEVTANA every three weeks plus prednisone, 240 patients (64.7%) were 65 years of age and over, while 70 patients (18.9%) were 75 years of age and over. No overall differences in effectiveness were observed between patients  $\geq 65$  years of age and younger patients. Elderly patients ( $\geq 65$  years of age) may be more likely to experience certain adverse reactions. The incidence of death due to causes other than disease progression within 30 days of the last cabazitaxel dose were higher in patients who were 65 years of age or greater compared to younger patients [see Warnings and Precautions (5.6)]. The incidence of grade 3–4 neutropenia and febrile neutropenia were higher in patients who were 65 years of age or greater compared to younger patients. The incidence of neutropenia, fatigue, asthenia, pyrexia, dizziness, urinary tract infection and dehydration occurred at rates  $\geq 5\%$  higher in patients who were 65 years of age or greater compared to younger patients [see Adverse Reactions (6.1)].

Based on a population pharmacokinetic analysis, no significant difference was observed in the pharmacokinetics of cabazitaxel between patients  $< 65$  years (n=100) and older (n=70).

##### 8.6 Renal Impairment

No dose adjustment is necessary in patients with renal impairment not requiring hemodialysis. Patients presenting with end-stage renal disease (creatinine clearance  $CL_{CR} < 15$  mL/min/1.73 m<sup>2</sup>), should be monitored carefully during treatment [see Clinical Pharmacology (12.3)].

#### 8.7 Hepatic Impairment

Cabazitaxel is extensively metabolized in the liver. Patients with mild hepatic impairment (total bilirubin  $> 1$  to  $\leq 1.5 \times$  ULN or AST  $> 1.5 \times$  ULN) should have JEVTANA dose reduced to 20 mg/m<sup>2</sup>. Administration of cabazitaxel to patients with mild hepatic impairment should be undertaken with caution and close monitoring of safety [see Clinical Pharmacology (12.3)]. The maximum tolerated dose in patients with moderate hepatic impairment (total bilirubin  $> 1.5$  to  $\leq 3.0 \times$  ULN and AST = any) was 15 mg/m<sup>2</sup>, however, the efficacy at this dose level was unknown. JEVTANA is contraindicated in patients with severe hepatic impairment (total bilirubin  $> 3 \times$  ULN) [see Contraindications (4)].

#### 10 OVERDOSAGE

There is no known antidote for JEVTANA overdose. Overdose has resulted from improper preparation [see Dosage and Administration (2.5)]. Read the entire section Dosage and Administration (2) carefully before mixing or diluting. Complications of overdose include exacerbation of adverse reactions such as bone marrow suppression and gastrointestinal disorders. Overdose has led to fatal outcome.

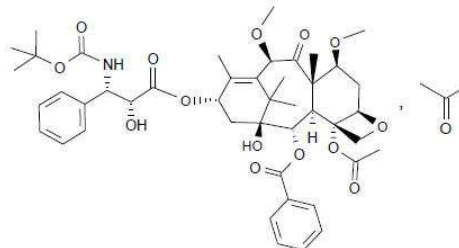
In case of overdose, the patient should be kept in a specialized unit where vital signs, chemistry and particular functions can be closely monitored. Patients should receive therapeutic G-CSF as soon as possible after discovery of overdose. Other appropriate symptomatic measures should be taken, as needed.

#### 11 DESCRIPTION

JEVTANA (cabazitaxel) injection is an antineoplastic agent belonging to the taxane class that is for intravenous use. It is prepared by semi-synthesis with a precursor extracted from yew needles.

The chemical name of cabazitaxel is (2 $\alpha$ ,5 $\beta$ ,7 $\beta$ ,10 $\beta$ ,13 $\alpha$ )-4-acetoxy-13-(((2R,3S)-3-((tert-butoxycarbonyl) amino)-2-hydroxy-3-phenylpropano[yl]oxy)-1-hydroxy-7,10-dimethoxy-9-oxo-5,20-epoxytax-11-en-2-yl) benzoate – propan-2-one (1:1).

Cabazitaxel has the following structural formula:



Cabazitaxel is a white to almost-white powder with a molecular formula of C<sub>45</sub>H<sub>57</sub>NO<sub>14</sub>·C<sub>3</sub>H<sub>7</sub>O and a molecular weight of 894.01 (for the acetone solvate) / 835.93 (for the solvent free). It is lipophilic, practically insoluble in water and soluble in alcohol.

JEVTANA (cabazitaxel) injection 60 mg/1.5 mL is a sterile, non-pyrogenic, clear yellow to brownish-yellow viscous solution and is available in single-dose vials containing 60 mg cabazitaxel (anhydrous and solvent free) and 1.56 g polysorbate 80.

Each mL contains 40 mg cabazitaxel (anhydrous) and 1.04 g polysorbate 80.

DILUENT for JEVTANA is a clear, colorless, sterile, and non-pyrogenic solution containing 13% (w/w) ethanol in water for injection, approximately 5.7 mL.

JEVTANA requires two dilutions prior to intravenous infusion. JEVTANA injection should be diluted only with the supplied DILUENT for JEVTANA, followed by dilution in either 0.9% sodium chloride solution or 5% dextrose solution.

#### 12 CLINICAL PHARMACOLOGY

##### 12.1 Mechanism of Action

Cabazitaxel is a microtubule inhibitor. Cabazitaxel binds to tubulin and promotes its assembly into microtubules while simultaneously inhibiting disassembly. This leads to the stabilization of microtubules, which results in the inhibition of mitotic and interphase cellular functions.

##### 12.2 Pharmacodynamics

###### Cardiac Electrophysiology

The effect of cabazitaxel following a single dose of 25 mg/m<sup>2</sup> administered by intravenous infusion on QTc interval was evaluated in 94 patients with solid tumors. No large changes in the mean QT interval (i.e.,  $> 20$  ms) from baseline based on Fridericia correction method were detected. However, a small increase in the mean QTc interval (i.e.,  $< 10$  ms) cannot be excluded due to study design limitations.

##### 12.3 Pharmacokinetics

A population pharmacokinetic analysis was conducted in 170 patients with solid tumors at doses ranging from 10 to 30 mg/m<sup>2</sup> weekly or every three weeks.

###### Absorption

Based on the population pharmacokinetic analysis, after an intravenous dose of 25 mg/m<sup>2</sup> every three weeks, the mean  $C_{max}$  in patients with metastatic prostate cancer was 226 ng/mL (CV 107%) and was reached at the end of the one-hour infusion ( $T_{max}$ ). The mean AUC in patients with metastatic prostate cancer was 991 ng·h/mL (CV 34%).

No major deviation from the dose proportionality was observed from 10 to 30 mg/m<sup>2</sup> in patients with advanced solid tumors.

###### Distribution

The volume of distribution ( $V_{ss}$ ) was 4,864 L (2,643 L/m<sup>2</sup> for a patient with a median BSA of 1.84 m<sup>2</sup>) at steady state.

*In vitro*, the binding of cabazitaxel to human serum proteins was 89% to 92% and was not saturable up to 50,000 ng/mL, which covers the maximum concentration observed in clinical trials. Cabazitaxel is mainly bound to human serum albumin (82%) and lipoproteins (88% for HDL, 70% for LDL, and 56% for VLDL). The *in vitro* blood-to-plasma concentration ratio in human blood ranged from 0.90 to 0.99, indicating that cabazitaxel was equally distributed between blood and plasma.

###### Metabolism

Cabazitaxel is extensively metabolized in the liver ( $> 95\%$ ), mainly by the CYP3A4/5 isoenzyme (80% to 90%), and to a lesser extent by CYP2C8. Cabazitaxel is the main circulating moiety in human plasma. Seven metabolites were detected in plasma (including the 3 active metabolites issued from O-demethylation), with the main one accounting for 5% of cabazitaxel exposure. Around 20 metabolites of cabazitaxel are excreted into human urine and feces.

###### Elimination

After a one-hour intravenous infusion [<sup>14</sup>C]-cabazitaxel 25 mg/m<sup>2</sup>, approximately 80% of the administered dose was eliminated within 2 weeks. Cabazitaxel is mainly excreted in the feces as numerous metabolites (76% of the dose); while renal excretion of cabazitaxel and metabolites account for 3.7% of the dose (2.3% as unchanged drug in urine).

Based on the population pharmacokinetic analysis, cabazitaxel has a plasma clearance of 48.5 L/h (CV 39%; 26.4 L/h/m<sup>2</sup> for a patient with a median BSA of 1.84 m<sup>2</sup>) in patients with metastatic prostate cancer. Following a one-hour intravenous infusion, plasma concentrations of cabazitaxel can be described by a three-compartment pharmacokinetic model with  $\alpha$ -,  $\beta$ -, and  $\gamma$ - half-lives of 4 minutes, 2 hours, and 95 hours, respectively.

#### Renal Impairment

Cabazitaxel is minimally excreted via the kidney. A population pharmacokinetic analysis carried out in 170 patients including 14 patients with moderate renal impairment (30 mL/min  $\leq$  CL<sub>CR</sub> < 50 mL/min) and 59 patients with mild renal impairment (50 mL/min  $\leq$  CL<sub>CR</sub> < 80 mL/min) showed that mild to moderate renal impairment did not have meaningful effects on the pharmacokinetics of cabazitaxel. This was confirmed by a dedicated comparative pharmacokinetic study in patients with solid tumors with normal renal function (n=8, CL<sub>CR</sub> > 80 mL/min/1.73 m<sup>2</sup>), or moderate (n=8, 30 mL/min/1.73 m<sup>2</sup>  $\leq$  CL<sub>CR</sub> < 50 mL/min/1.73 m<sup>2</sup>) and severe (n=9, CL<sub>CR</sub> < 30 mL/min/1.73 m<sup>2</sup>) renal impairment, who received several cycles of cabazitaxel in single IV infusion up to 25 mg/m<sup>2</sup>. Limited pharmacokinetic data were available in patients with end-stage renal disease (n=2, CL<sub>CR</sub> < 15 mL/min/1.73 m<sup>2</sup>).

#### Hepatic Impairment

Cabazitaxel is extensively metabolized in the liver.

A dedicated study in 43 cancer patients with hepatic impairment showed no influence of mild (total bilirubin > 1 to  $\leq$  1.5  $\times$  ULN or AST > 1.5  $\times$  ULN) or moderate (total bilirubin > 1.5 to  $\leq$  3.0  $\times$  ULN) hepatic impairment on cabazitaxel pharmacokinetics. The maximum tolerated dose (MTD) of cabazitaxel was 20 and 15 mg/m<sup>2</sup>, respectively.

In 3 patients with severe hepatic impairment (total bilirubin > 3  $\times$  ULN), a 39% decrease in clearance was observed when compared to patients with mild hepatic impairment (ratio=0.61, 90% CI: 0.36–1.05), indicating some effect of severe hepatic impairment on cabazitaxel pharmacokinetics. The MTD of cabazitaxel in patients with severe hepatic impairment was not established. Based on safety and tolerability data, cabazitaxel dose should be reduced in patients with mild and moderate hepatic impairment [see *Warnings and Precautions* (5.7) and *Use in Specific Populations* (8.7)]. Cabazitaxel is contraindicated in patients with severe hepatic impairment [see *Contraindications* (4) and *Use in Specific Populations* (8.7)].

#### Drug interactions

A drug interaction study of JEV TANA in 23 patients with advanced cancers has shown that repeated administration of ketoconazole (400 mg orally once daily), a strong CYP3A inhibitor, increased the exposure to cabazitaxel (5 mg/m<sup>2</sup> intravenous) by 25%.

A drug interaction study of JEV TANA in 13 patients with advanced cancers has shown that repeated administration of aprepitant (125 or 80 mg once daily), a moderate CYP3A inhibitor, did not modify the exposure to cabazitaxel (15 mg/m<sup>2</sup> intravenous).

A drug interaction study of JEV TANA in 21 patients with advanced cancers has shown that repeated administration of rifampin (600 mg once daily), a strong CYP3A inducer, decreased the exposure to cabazitaxel (15 mg/m<sup>2</sup> intravenous) by 17%.

A drug interaction study of JEV TANA in 11 patients with advanced cancers has shown that cabazitaxel (25 mg/m<sup>2</sup> administered as a single 1-hour infusion) did not modify the exposure to midazolam, a probe substrate of CYP3A.

Prednisone or prednisolone administered at 10 mg daily did not affect the pharmacokinetics of cabazitaxel.

Based on *in vitro* studies, the potential for cabazitaxel to inhibit drugs that are substrates of other CYP isoenzymes (1A2, 2B6, 2C9, 2C8, 2C19, 2E1, 2D6, and CYP3A4/5) is low.

In addition, cabazitaxel did not induce CYP isozymes (1A, 2C9 and 3A) *in vitro*.

*In vitro*, cabazitaxel did not inhibit the multidrug-resistance protein 1 (MRP1), 2 (MRP2) or organic cation transporter (OCT1). *In vitro*, cabazitaxel inhibited P-gp, BCRP, and organic anion transporting polypeptides (OATP1B1, OATP1B3). However the *in vivo* risk of cabazitaxel inhibiting MRPs, OCT1, P-gp, BCRP, OATP1B1 or OATP1B3 is low at the dose of 25 mg/m<sup>2</sup>.

*In vitro*, cabazitaxel is a substrate of P-gp, but not a substrate of MRP1, MRP2, BCRP, OCT1, OATP1B1 or OATP1B3.

### 13 NONCLINICAL TOXICOLOGY

#### 13.1 Carcinogenesis, Mutagenesis, Impairment of Fertility

Long-term animal studies have not been performed to evaluate the carcinogenic potential of cabazitaxel.

Cabazitaxel was positive for clastogenesis in the *in vivo* micronucleus test, inducing an increase of micronuclei in rats at doses  $\geq$  0.5 mg/kg. Cabazitaxel increased numerical aberrations with or without metabolic activation in an *in vitro* test in human lymphocytes though no induction of structural aberrations was observed. Cabazitaxel did not induce mutations in the bacterial reverse mutation (Ames) test. The positive *in vivo* genotoxicity findings are consistent with the pharmacological activity of the compound (inhibition of tubulin depolymerization).

Cabazitaxel may impair fertility in humans. In a fertility study performed in female rats at cabazitaxel doses of 0.05, 0.1, or 0.2 mg/kg/day there was no effect of administration of the drug on mating behavior or the ability to become pregnant. There was an increase in pre-implantation loss at the 0.2 mg/kg/day dose and an increase in early resorptions at doses  $\geq$  0.1 mg/kg/day (approximately 0.02–0.06 times the human clinical exposure based on C<sub>max</sub>). In multi-cycle studies following the clinically recommended dosing schedule, atrophy of the uterus was observed at the 5 mg/kg dose level (approximately the AUC in patients with cancer at the recommended human dose) along with necrosis of the corpora lutea at doses  $\geq$  1 mg/kg (approximately 0.2 times the AUC at the clinically recommended human dose).

Cabazitaxel did not affect mating performances or fertility of treated male rats at doses of 0.05, 0.1, or 0.2 mg/kg/day. In multiple-cycle studies following the clinically recommended dosing schedule, however, degeneration of seminal vesicle and seminiferous tubule atrophy in the testis were observed in rats treated intravenously with cabazitaxel at a dose of 1 mg/kg (approximately 0.2–0.35 times the AUC in patients with cancer at the recommended human dose), and minimal testicular degeneration (minimal epithelial single cell necrosis in epididymis) was observed in dogs treated with a dose of 0.5 mg/kg (approximately one-tenth of the AUC in patients with cancer at the recommended human dose).

### 14 CLINICAL STUDIES

The efficacy and safety of JEV TANA in combination with prednisone were evaluated in a randomized, open-label, international, multicenter study in patients with hormone-refractory metastatic prostate cancer previously treated with a docetaxel-containing treatment regimen.

A total of 755 patients were randomized to receive either JEV TANA 25 mg/m<sup>2</sup> intravenously every 3 weeks for a maximum of 10 cycles with prednisone 10 mg orally daily (n=378), or to receive mitoxantrone 12 mg/m<sup>2</sup> intravenously every 3 weeks for 10 cycles with prednisone 10 mg orally daily (n=377) for a maximum of 10 cycles.

This study included patients over 18 years of age with hormone-refractory metastatic prostate cancer either measurable by RECIST criteria or non-measurable disease with rising PSA levels or appearance

of new lesions, and ECOG (Eastern Cooperative Oncology Group) performance status 0–2. Patients had to have neutrophils > 1,500 cells/mm<sup>3</sup>, platelets > 100,000 cells/mm<sup>3</sup>, hemoglobin > 10 g/dL, creatinine < 1.5  $\times$  upper limit of normal (ULN), total bilirubin < 1  $\times$  ULN, AST < 1.5  $\times$  ULN, and ALT < 1.5  $\times$  ULN. Patients with a history of congestive heart failure, or myocardial infarction within the last 6 months, or patients with uncontrolled cardiac arrhythmias, angina pectoris, and/or hypertension were not included in the study.

Demographics, including age, race, and ECOG performance status (0–2) were balanced between the treatment arms. The median age was 68 years (range 46–92) and the racial distribution for all groups was 83.9% Caucasian, 6.9% Asian, 5.3% Black, and 4% Others in the JEV TANA group.

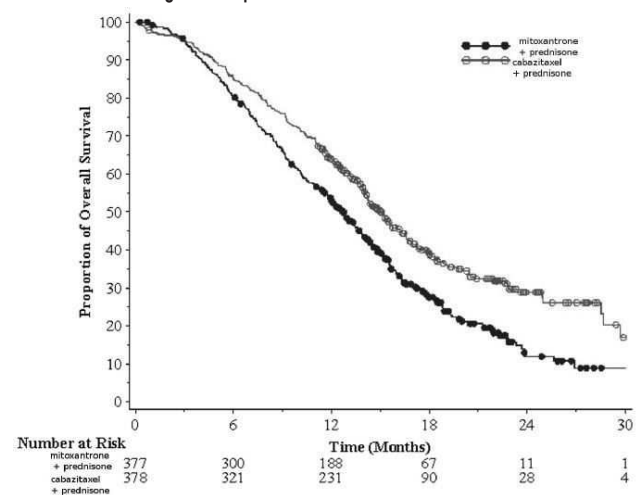
Efficacy results for the JEV TANA arm versus the control arm are summarized in Table 3 and Figure 1.

**Table 3: Efficacy of JEV TANA in the Treatment of Patients with Hormone Refractory Metastatic Prostate Cancer (Intent-to-Treat Analysis)**

	JEV TANA + Prednisone n=378	Mitoxantrone + Prednisone n=377
<b>Overall Survival</b>		
Number of deaths (%)	234 (61.9 %)	279 (74%)
Median survival (month) (95% CI)	15.1 (14.1–16.3)	12.7 (11.6–13.7)
Hazard Ratio* (95% CI)	0.70 (0.59–0.83)	
p-value	<0.0001	

\*Hazard ratio estimated using Cox model; a hazard ratio of less than 1 favors JEV TANA

**Figure 1: Kaplan-Meier Overall Survival Curves**



Investigator-assessed tumor response of 14.4% (95% CI: 9.6–19.3) was higher for patients in the JEV TANA arm compared to 4.4% (95% CI: 1.6–7.2) for patients in the mitoxantrone arm, p=0.0005.

### 15 REFERENCES

1. OSHA Hazardous Drugs. OSHA. <http://www.osha.gov/SLTC/hazardousdrugs/index.html>

### 16 HOW SUPPLIED/STORAGE AND HANDLING

#### 16.1 How Supplied

JEV TANA is supplied as a kit consisting of the following:

- One single-dose vial of JEV TANA (cabazitaxel) injection: a clear yellow to brownish-yellow viscous solution of 60 mg/1.5 mL in a clear glass vial with a grey rubber closure, aluminum cap, and light green plastic flip-off cap
- One single-dose vial of Diluent for JEV TANA: a clear colorless solution of 13% (w/w) ethanol in water for injection in a clear glass vial with a grey rubber closure, gold-color aluminum cap, and colorless plastic flip-off cap.

Both items are in a blister pack in one carton.

NDC 0024-5824-11

#### 16.2 Storage

JEV TANA injection and Diluent for JEV TANA:

Store at 25°C (77°F); excursions permitted between 15°–30°C (59°–86°F).

Do not refrigerate.

#### 16.3 Handling and Disposal

JEV TANA is a cytotoxic anticancer drug. Follow applicable special handling and disposable procedures [see *References* (15)].

### 17 PATIENT COUNSELING INFORMATION

Advise the patient to read the FDA-approved patient labeling (Patient Information).

#### Hypersensitivity Reactions

Educate patients about the risk of potential hypersensitivity associated with JEV TANA. Confirm patients do not have a history of severe hypersensitivity reactions to cabazitaxel or to other drugs formulated with polysorbate 80. Instruct patients to immediately report signs of a hypersensitivity reaction [see *Contraindications* (4) and *Warnings and Precautions* (5.2)].

#### Bone Marrow Suppression

Inform patients that JEV TANA decreases blood count such as white blood cells, platelets and red blood cells. Thus, it is important that periodic assessment of their blood count be performed to detect the development of neutropenia, thrombocytopenia, anemia, and/or pancytopenia [see *Contraindications* (4) and *Warnings and Precautions* (5.1)]. Instruct patients to monitor their temperature frequently and immediately report any occurrence of fever to their healthcare provider.

### Importance of Prednisone

Explain that it is important to take the oral prednisone as prescribed. Instruct patients to report if they were not compliant with oral corticosteroid regimen [see *Dosage and Administration* (2.1)].

### Infections, Dehydration, Renal Failure

Explain to patients that severe and fatal infections, dehydration, and renal failure have been associated with cabazitaxel exposure. Patients should immediately report fever, significant vomiting or diarrhea, decreased urinary output, and hematuria to their healthcare provider [see *Warnings and Precautions* (5.1, 5.3, 5.4)].

### Respiratory Disorders

Explain to patients that severe and fatal interstitial pneumonia/pneumonitis, interstitial lung disease and acute respiratory distress syndrome have occurred with JEV-TANA. Instruct patients to immediately report new or worsening pulmonary symptoms to their healthcare provider [see *Warnings and Precautions* (5.5)].

### Drug Interactions

Inform patients about the risk of drug interactions and the importance of providing a list of prescription and non-prescription drugs to their healthcare provider [see *Drug Interactions* (7.1)].

### Use in Elderly Patients

Inform elderly patients that certain side effects may be more frequent or severe [see *Warnings and Precautions* (5.6) and *Use in Specific Populations* (8.5)].

sanofi-aventis U.S. LLC Bridgewater, NJ 08807

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## Patient Information JEVTANA® (JEV-TA-NA) (cabazitaxel) Injection

Read this Patient Information before you start receiving JEV-TANA and each time before you receive your infusion. There may be new information. This information does not take the place of talking to your healthcare provider about your medical condition or your treatment

### What is the most important information I should know about JEV-TANA?

#### JEVTANA may cause serious side effects including:

**Low white blood cells.** Low white blood cells can cause you to get serious infections, and may lead to death. People who are 65 years or older may be more likely to have these problems. Your healthcare provider:

- will do blood tests regularly to check your white blood cell counts during your treatment with JEV-TANA.
- may lower your dose of JEV-TANA, change how often you receive it, or stop JEV-TANA until your healthcare provider decides that you have enough white blood cells.
- may prescribe a medicine for you called G-CSF, to help prevent complications if your white blood cell count is too low.

#### Tell your healthcare provider right away if you have any of these symptoms of infection during treatment with JEV-TANA:

- fever. Take your temperature often during treatment with JEV-TANA.
- cough
- burning on urination
- muscle aches

Also, tell your healthcare provider if you have any diarrhea during the time that your white blood cell count is low. Your healthcare provider may prescribe treatment for you as needed.

**Severe allergic reactions.** Severe allergic reactions can happen within a few minutes after your infusion of JEV-TANA starts, especially during the first and second infusions. Your healthcare provider should prescribe medicines before each infusion to help prevent severe allergic reactions.

#### Tell your healthcare provider or nurse right away if you have any of these symptoms of a severe allergic reaction during or soon after an infusion of JEV-TANA:

- rash or itching
- skin redness
- feeling dizzy or faint
- breathing problems
- chest or throat tightness
- swelling of face

### Severe stomach and intestine (gastrointestinal) problems. JEV-TANA can cause severe stomach and intestine problems, which may lead to death. You may need to go to the hospital for treatment.

- Vomiting and diarrhea can happen when you receive JEV-TANA. Severe vomiting and diarrhea with JEV-TANA can lead to loss of too much body fluid (dehydration), or too much of your body salts (electrolytes). Death has happened from having severe diarrhea and losing too much body fluid or body salts with JEV-TANA. Your healthcare provider will prescribe medicines to prevent or treat vomiting and diarrhea, as needed with JEV-TANA.

#### Tell your healthcare provider if:

- you have vomiting or diarrhea
- your symptoms get worse or do not get better

JEVTANA can cause a leak in the stomach or intestine, intestinal blockage, infection, and bleeding in the stomach or intestine. This can lead to death. **Tell your healthcare provider if you get any of these symptoms:**

- severe stomach-area (abdomen) pain
- constipation
- fever
- blood in your stool, or changes in the color of your stool

**Kidney failure.** Kidney failure may happen with JEV-TANA, because of severe infection, loss of too much body fluid (dehydration), and other reasons, which may lead to death. Your healthcare provider will check you for this problem and treat you if needed.

#### Tell your healthcare provider if you develop these signs or symptoms:

- swelling of your face or body
- decrease in the amount of urine that your body makes each day

**Lung or breathing problems.** Lung or breathing problems may happen with JEV-TANA and may lead to death. People who have lung disease before receiving JEV-TANA may have a higher risk for developing lung or breathing problems with JEV-TANA treatment. Your healthcare provider will check you for this problem and treat you if needed.

#### Tell your healthcare provider right away if you develop any new or worsening symptoms, including: trouble breathing, shortness of breath, chest pain, cough or fever.

### What is JEV-TANA?

JEVTANA is a prescription anti-cancer medicine used with the steroid medicine prednisone. JEV-TANA is used to treat people with prostate cancer that has worsened (progressed) after treatment with other anti-cancer medicines, including docetaxel. It is not known if JEV-TANA is safe and effective in children. JEV-TANA is not for use in females.

### Who should not receive JEV-TANA Injection?

#### Do not receive JEV-TANA if:

- your white blood cell (neutrophil count) is too low
- you have had a severe allergic reaction to cabazitaxel or other medicines that contain polysorbate 80. Ask your healthcare provider if you are not sure.
- you have severe liver problems

### What should I tell my healthcare provider before receiving JEV-TANA?

#### Before receiving JEV-TANA, tell your healthcare provider if you:

- had allergic reactions in the past
- have kidney or liver problems
- have lung problems
- are over the age of 65
- have any other medical conditions

- are a female and:
  - are pregnant or plan to become pregnant. JEV TANA can harm your unborn baby. Talk to your healthcare provider about the best way for you to prevent pregnancy while you are receiving JEV TANA.
  - are breastfeeding or plan to breastfeed. It is not known if JEV TANA passes into your breast milk. You and your healthcare provider should decide if you will take JEV TANA or breastfeed. You should not do both.
- Tell your healthcare provider about all the medicines you take**, including prescription and over-the-counter medicines, vitamins, and herbal supplements. JEV TANA can interact with many other medicines. Do not take any new medicines without asking your healthcare provider first. Your healthcare provider will tell you if it is safe to take the new medicine with JEV TANA.

**How will I receive JEV TANA?**

- JEV TANA will be given to you by an intravenous (IV) infusion into your vein.
- Your treatment will take about 1 hour.
- JEV TANA is usually given every 3 weeks. Your healthcare provider will decide how often you will receive JEV TANA.
- Your healthcare provider will also prescribe another medicine called prednisone, for you to take by mouth every day during treatment with JEV TANA. Your healthcare provider will tell you how and when to take your prednisone.

It is important that you take prednisone exactly as prescribed by your healthcare provider. If you forget to take your prednisone, or do not take it on schedule, make sure to tell your healthcare provider or nurse. Before each infusion of JEV TANA, you may receive other medicines to prevent or treat side effects.

**What are the possible side effects of JEV TANA?**  
**JEV TANA may cause serious side effects including:**

- See "What is the most important information I should know about JEV TANA?"

**Common side effects of JEV TANA include:**

- Low red blood cell count (anemia). Low red blood cell count is common with JEV TANA, but can sometimes also be serious. Your healthcare provider will regularly check your red blood cell count. Symptoms of anemia include shortness of breath and tiredness.
- Low blood platelet count. Low platelet count is common with JEV TANA, but can sometimes also be serious. Tell your healthcare provider if you have any unusual bruising or bleeding.
- Fever. See "What is the most important information I should know about JEV TANA?"

• tiredness	• shortness of breath
• nausea	• stomach (abdominal) pain
• constipation	• change in your sense of taste
• weakness	• cough
• blood in your urine. Tell your healthcare provider or nurse if you see blood in your urine.	• joint pain
• back pain	• hair loss
	• decreased appetite
• numbness, tingling, burning or decreased sensation in your hands or feet	

**Tell your healthcare provider if you have any side effect that bothers you or that does not go away.** These are not all the possible side effects of JEV TANA. For more information, ask your healthcare provider or pharmacist.  
 Call your doctor for medical advice about side effects. You may report side effects to FDA at 1-800-FDA-1088.

**General information about the safe and effective use of JEV TANA**  
 Medicines are sometimes prescribed for purposes other than those listed in a Patient Information leaflet. You can ask your pharmacist or healthcare provider for information about JEV TANA that is written for health professionals.

**What are the ingredients in JEV TANA?**  
 Active ingredient: cabazitaxel  
 Inactive ingredient: polysorbate 80

Manufactured by: sanofi-aventis U.S. LLC Bridgewater, NJ 08807  
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**For more information, go to [www.sanofi-aventis.us](http://www.sanofi-aventis.us) or call 1-800-633-1610.**

This Patient Information has been approved by the U.S. Food and Drug Administration  
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Rx Only