

## BILLING AND CODING INFORMATION

### INDICATIONS

CYRAMZA<sup>®</sup> (ramucirumab) as a single agent, or in combination with paclitaxel, is indicated for the treatment of patients with advanced or metastatic gastric or gastroesophageal junction (GEJ) adenocarcinoma with disease progression on or after prior fluoropyrimidine- or platinum-containing chemotherapy.

CYRAMZA, in combination with docetaxel, is indicated for the treatment of patients with metastatic non-small cell lung cancer (NSCLC) with disease progression on or after platinum-based chemotherapy. Patients with epidermal growth factor receptor (EGFR) or anaplastic lymphoma kinase (ALK) genomic tumor aberrations should have disease progression on FDA-approved therapy for these aberrations prior to receiving CYRAMZA.

CYRAMZA, in combination with FOLFIRI (irinotecan, folinic acid, and 5-fluorouracil), is indicated for the treatment of patients with metastatic colorectal cancer (mCRC) with disease progression on or after prior therapy with bevacizumab, oxaliplatin, and a fluoropyrimidine.

#### **WARNING: HEMORRHAGE, GASTROINTESTINAL PERFORATION, AND IMPAIRED WOUND HEALING**

**Hemorrhage: CYRAMZA increased the risk of hemorrhage and gastrointestinal hemorrhage, including severe and sometimes fatal hemorrhagic events. Permanently discontinue CYRAMZA in patients who experience severe bleeding.**

**Gastrointestinal Perforation: CYRAMZA can increase the risk of gastrointestinal perforation, a potentially fatal event. Permanently discontinue CYRAMZA in patients who experience a gastrointestinal perforation.**

**Impaired Wound Healing: Impaired wound healing can occur with antibodies inhibiting the VEGF pathway. Discontinue CYRAMZA therapy in patients with impaired wound healing. Withhold CYRAMZA prior to surgery and discontinue CYRAMZA if a patient develops wound healing complications.**

The following information is presented for informational purposes only and is not intended to provide reimbursement or legal advice. Laws, regulations, and policies concerning reimbursement are complex and are updated frequently. Individual coding decisions should be based upon diagnosis and treatment of individual patients. While we have made an effort to be current as of the issue date of this document, the information may not be as current or comprehensive when you view it. Providers are encouraged to contact third-party payers for specific information on their coverage, coding, and payment policies. Please consult with your legal counsel or reimbursement specialist for any reimbursement or billing questions. For more information, please call the Lilly PatientOne Program at 1-866-472-8663.

Please see Important Safety Information, including Boxed Warning for hemorrhage, gastrointestinal perforation, and impaired wound healing, on pages 14-18 and accompanying full [Prescribing Information](#) for CYRAMZA.



## Advanced Gastric and Gastroesophageal Junction Cancer

### CYRAMZA Billing and Coding Information

CYRAMZA as a single agent, or in combination with paclitaxel, is indicated for the treatment of patients with advanced or metastatic gastric or GEJ adenocarcinoma with disease progression on or after prior fluoropyrimidine- or platinum-containing chemotherapy.

#### CYRAMZA Is Administered as a Single Agent or in Combination With Paclitaxel

CYRAMZA is available in 100 mg/10 mL and 500 mg/50 mL (10 mg/mL) solution, single-dose vials.

#### CYRAMZA Dosing

- The recommended dose of CYRAMZA either as a single agent or in combination with weekly paclitaxel is 8 mg/kg every 2 weeks administered as an intravenous (IV) infusion over 60 minutes. Continue CYRAMZA until disease progression or unacceptable toxicity
- Do not administer as IV push or bolus. In the event of grade 1 or 2 infusion-related reaction (IRR), reduce infusion rate by 50%. Continue CYRAMZA until disease progression or unacceptable toxicity
- When given in combination, administer CYRAMZA prior to administration of paclitaxel

#### Paclitaxel Administration

- Prior to administration of each dose of paclitaxel, patients were required to have adequate hematopoietic and hepatic function. The paclitaxel dose was permanently reduced in increments of 10 mg/m<sup>2</sup> for a maximum of two dose reductions for grade 4 hematologic toxicity or grade 3 paclitaxel-related non-hematologic toxicity
- For toxicities related to paclitaxel, refer to the current paclitaxel Prescribing Information

#### Premedication for CYRAMZA

- Prior to each CYRAMZA infusion, premedicate all patients with an IV histamine H<sub>1</sub> antagonist (eg, diphenhydramine hydrochloride)
- For patients who have experienced a grade 1 or 2 infusion reaction, also premedicate with dexamethasone (or equivalent) and acetaminophen prior to each CYRAMZA infusion

### SELECT IMPORTANT SAFETY INFORMATION

#### Infusion-Related Reactions (IRRs)

- Prior to the institution of premedication recommendations across clinical trials of CYRAMZA, IRRs occurred in 6 out of 37 patients (16%), including 2 severe events. The majority of IRRs across trials occurred during or following a first or second CYRAMZA infusion. Symptoms of IRRs included rigors/tremors, back pain/spasms, chest pain and/or tightness, chills, flushing, dyspnea, wheezing, hypoxia, and paresthesia. In severe cases, symptoms included bronchospasm, supraventricular tachycardia, and hypotension. Monitor patients during the infusion for signs and symptoms of IRRs in a setting with available resuscitation equipment. Immediately and permanently discontinue CYRAMZA for grade 3 or 4 IRRs.

Please see Important Safety Information, including Boxed Warning for hemorrhage, gastrointestinal perforation, and impaired wound healing, on pages 14-18 and accompanying full [Prescribing Information](#) for CYRAMZA.

  
**CYRAMZA**<sup>®</sup>  
ramucirumab injection  
10 mg/mL solution



## Advanced Gastric and Gastroesophageal Junction Cancer

### CYRAMZA Billing and Coding Information, Continued

CYRAMZA as a single agent, or in combination with paclitaxel, is indicated for the treatment of patients with advanced or metastatic gastric or GEJ adenocarcinoma with disease progression on or after prior fluoropyrimidine- or platinum-containing chemotherapy.

#### Dose Modifications for CYRAMZA

- Infusion-related reactions
  - **Reduce infusion rate by 50%** for grade 1 or 2
  - **Permanently discontinue** for grade 3 or 4
- Hypertension
  - **Interrupt CYRAMZA** for severe hypertension until controlled with medical management
  - **Permanently discontinue** if severe hypertension cannot be controlled with antihypertensive therapy
- Proteinuria
  - **Interrupt CYRAMZA** for urine protein levels  $\geq 2$  g/24 h. Reinitiate treatment at a reduced dose of 6 mg/kg every 2 weeks once the urine protein level returns to  $< 2$  g/24 h. If the urine protein level  $\geq 2$  g/24 h reoccurs, interrupt CYRAMZA and reduce the dose to 5 mg/kg every 2 weeks once the urine protein level returns to  $< 2$  g/24 h
  - **Permanently discontinue** if urine protein level  $> 3$  g/24 h or in the setting of nephrotic syndrome
- Wound healing complications
  - **Interrupt CYRAMZA** prior to scheduled surgery until the wound is fully healed
- Arterial thromboembolic events
  - **Permanently discontinue**
- Gastrointestinal perforation
  - **Permanently discontinue**
- Grade 3 or 4 bleeding
  - **Permanently discontinue**

#### SELECT IMPORTANT SAFETY INFORMATION

##### Hemorrhage

- CYRAMZA increased the risk of hemorrhage and gastrointestinal hemorrhage including severe and sometimes fatal hemorrhagic events. In study 1, which evaluated CYRAMZA as a single agent in advanced gastric cancer, the incidence of severe bleeding was 3.4% for CYRAMZA and 2.6% for placebo. In study 2, which evaluated CYRAMZA plus paclitaxel in advanced gastric cancer, the incidence of severe bleeding was 4.3% for CYRAMZA plus paclitaxel and 2.4% for placebo plus paclitaxel. Patients with gastric cancer receiving nonsteroidal anti-inflammatory drugs (NSAIDs) were excluded from enrollment in studies 1 and 2; therefore, the risk of gastric hemorrhage in CYRAMZA-treated patients with gastric tumors receiving NSAIDs is unknown. In study 3, which evaluated CYRAMZA plus docetaxel in metastatic non-small cell lung cancer (NSCLC), the incidence of severe bleeding was 2.4% for CYRAMZA plus docetaxel and 2.3% for placebo plus docetaxel. Patients with NSCLC receiving therapeutic anticoagulation or chronic therapy with NSAIDs or other antiplatelet therapy other than once-daily aspirin or with radiographic evidence of major airway or blood vessel invasion or intratumor cavitation were excluded from study 3; therefore, the risk of pulmonary hemorrhage in these groups of patients is unknown. In study 4, which evaluated CYRAMZA plus FOLFIRI in metastatic colorectal cancer, the incidence of severe bleeding was 2.5% for CYRAMZA plus FOLFIRI and 1.7% for placebo plus FOLFIRI. Permanently discontinue CYRAMZA in patients who experience severe bleeding.

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## Advanced Gastric and Gastroesophageal Junction Cancer

### CYRAMZA Billing and Coding Information, Continued

CYRAMZA as a single agent, or in combination with paclitaxel, is indicated for the treatment of patients with advanced or metastatic gastric or GEJ adenocarcinoma with disease progression on or after prior fluoropyrimidine- or platinum-containing chemotherapy.

**All coding and documentation requirements for drugs should be confirmed with each payer.**

#### Diagnosis Code for Gastroesophageal Junction Cancer

Use this diagnosis code specifically for GEJ cancer.

ICD-10 Code*	Description
C16.0	Cardia, cardiac orifice, cardio-esophageal junction, gastroesophageal junction, esophagus, and stomach

#### Diagnosis Codes for Gastric Cancer

ICD-10 Code*	Description
	Malignant neoplasm of:
C16.0	Cardia
C16.1	Fundus of stomach
C16.2	Body of stomach
C16.3	Pyloric antrum
C16.4	Pylorus
C16.5	Lesser curvature of stomach, unspecified
C16.6	Greater curvature of stomach, unspecified
C16.8	Overlapping sites of stomach
C16.9	Stomach, unspecified site

\*Please check to ensure that codes are used to the highest level of specificity.  
ICD=International Classification of Diseases.

### SELECT IMPORTANT SAFETY INFORMATION

#### Arterial Thromboembolic Events (ATEs)

- Serious, sometimes fatal, ATEs including myocardial infarction, cardiac arrest, cerebrovascular accident, and cerebral ischemia occurred in clinical trials including 1.7% of 236 patients who received CYRAMZA as a single agent for gastric cancer in study 1. Permanently discontinue CYRAMZA in patients who experience a severe ATE.

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## Advanced Gastric and Gastroesophageal Junction Cancer CYRAMZA Billing and Coding Information, Continued

CYRAMZA as a single agent, or in combination with paclitaxel, is indicated for the treatment of patients with advanced or metastatic gastric or GEJ adenocarcinoma with disease progression on or after prior fluoropyrimidine- or platinum-containing chemotherapy.

All coding and documentation requirements for drugs should be confirmed with each payer.

### HCPCS Codes

CYRAMZA Specific Code	Description	Setting
J9308	Injection, ramucirumab, 5 mg	Physician office
C9025	Injection, ramucirumab, 5 mg	Hospital outpatient

Effective January 1, 2016, CYRAMZA-specific J-Code. The Centers for Medicare & Medicaid Services assigned a 5-mg billing unit for CYRAMZA. Please confirm specific billing requirements, including wastage, with each individual payer.

The C-Code will be discontinued for dates of service after December 31, 2015.

### NDC

Vial Size	NDC*
100 mg/10 mL	<b>00002-7669-01</b>
500 mg/50 mL	<b>00002-7678-01</b>

### Drug Administration CPT® Code

CPT Code	Description
96413	Chemotherapy administration, intravenous infusion technique; up to 1 hour, single or initial substance/drug

\*FDA standard NDC has been "zero-filled" to ensure creation of an 11-digit code that meets HIPAA standards. The zero-fill location is indicated in bold.

HCPCS=Healthcare Common Procedure Coding System; NDC=National Drug Code; CPT=Current Procedural Terminology; HIPAA=Health Insurance Portability and Accountability Act.

CPT is a registered trademark of the American Medical Association.

## SELECT IMPORTANT SAFETY INFORMATION

### Hypertension

- An increased incidence of severe hypertension occurred in patients receiving CYRAMZA as a single agent (8%) as compared to placebo (3%), in patients receiving CYRAMZA plus paclitaxel (15%) as compared to placebo plus paclitaxel (3%), and in patients receiving CYRAMZA plus docetaxel (6%) as compared to placebo plus docetaxel (2%), and in patients receiving CYRAMZA plus FOLFIRI (11%) as compared to placebo plus FOLFIRI (3%). Control hypertension prior to initiating treatment with CYRAMZA. Monitor blood pressure every 2 weeks or more frequently as indicated during treatment. Temporarily suspend CYRAMZA for severe hypertension until medically controlled. Permanently discontinue CYRAMZA if medically significant hypertension cannot be controlled with antihypertensive therapy or in patients with hypertensive crisis or hypertensive encephalopathy.

Please see Important Safety Information, including Boxed Warning for hemorrhage, gastrointestinal perforation, and impaired wound healing, on pages 14-18 and accompanying full [Prescribing Information](#) for CYRAMZA.





## Metastatic Non-Small Cell Lung Cancer CYRAMZA Billing and Coding Information

CYRAMZA, in combination with docetaxel, is indicated for the treatment of patients with metastatic NSCLC with disease progression on or after platinum-based chemotherapy. Patients with EGFR or ALK genomic tumor aberrations should have disease progression on FDA-approved therapy for these aberrations prior to receiving CYRAMZA.

### **CYRAMZA Is Administered in Combination With Docetaxel for Metastatic NSCLC**

CYRAMZA is available in 100 mg/10 mL and 500 mg/50 mL (10 mg/mL) solution, single-dose vials.

### **CYRAMZA Dosing**

- The recommended dose of CYRAMZA is 10 mg/kg administered by IV infusion over 60 minutes on day 1 of a 21-day cycle prior to docetaxel infusion
- Administer docetaxel at 75 mg/m<sup>2</sup> by IV infusion over 60 minutes on day 1 of a 21-day cycle
- For IV infusion only. Do not administer as IV push or bolus. Continue CYRAMZA until disease progression or unacceptable toxicity. In the event of a grade 1 or 2 IRR, reduce infusion rate by 50%
- See docetaxel Prescribing Information for premedication and dose administration instructions

### **Premedication for CYRAMZA**

- Prior to each CYRAMZA infusion, premedicate all patients with an IV histamine H<sub>1</sub> antagonist (eg, diphenhydramine hydrochloride)
- For patients who have experienced a grade 1 or 2 IRR, also premedicate with dexamethasone (or equivalent) and acetaminophen prior to each CYRAMZA infusion

## **SELECT IMPORTANT SAFETY INFORMATION**

### **Infusion-Related Reactions (IRRs)**

- Prior to the institution of premedication recommendations across clinical trials of CYRAMZA, IRRs occurred in 6 out of 37 patients (16%), including 2 severe events. The majority of IRRs across trials occurred during or following a first or second CYRAMZA infusion. Symptoms of IRRs included rigors/tremors, back pain/spasms, chest pain and/or tightness, chills, flushing, dyspnea, wheezing, hypoxia, and paresthesia. In severe cases, symptoms included bronchospasm, supraventricular tachycardia, and hypotension. Monitor patients during the infusion for signs and symptoms of IRRs in a setting with available resuscitation equipment. Immediately and permanently discontinue CYRAMZA for grade 3 or 4 IRRs.

Please see Important Safety Information, including Boxed Warning for hemorrhage, gastrointestinal perforation, and impaired wound healing, on pages 14-18 and accompanying full [Prescribing Information](#) for CYRAMZA.



**CYRAMZA**<sup>®</sup>  
ramucirumab injection  
10 mg/mL solution



## Metastatic Non-Small Cell Lung Cancer

### CYRAMZA Billing and Coding Information, Continued

CYRAMZA, in combination with docetaxel, is indicated for the treatment of patients with metastatic NSCLC with disease progression on or after platinum-based chemotherapy. Patients with EGFR or ALK genomic tumor aberrations should have disease progression on FDA-approved therapy for these aberrations prior to receiving CYRAMZA.

#### Dose Modifications for CYRAMZA

- Infusion-related reactions
  - **Reduce infusion rate by 50%** for grade 1 or 2
  - **Permanently discontinue** for grade 3 or 4
- Hypertension
  - **Interrupt CYRAMZA** for severe hypertension until controlled with medical management
  - **Permanently discontinue** if severe hypertension cannot be controlled with antihypertensive therapy
- Proteinuria
  - **Interrupt CYRAMZA** for urine protein levels  $\geq 2$  g/24 h. Reinitiate treatment at a reduced dose of 8 mg/kg every 3 weeks once the urine protein level returns to  $< 2$  g/24 h. If the urine protein level  $\geq 2$  g/24 h reoccurs, interrupt CYRAMZA and reduce the dose to 6 mg/kg every 3 weeks once the urine protein level returns to  $< 2$  g/24 h
  - **Permanently discontinue** if urine protein level  $> 3$  g/24 h or in the setting of nephrotic syndrome
- Wound healing complications
  - **Interrupt CYRAMZA** prior to scheduled surgery until the wound is fully healed
- Arterial thromboembolic events
  - **Permanently discontinue**
- Gastrointestinal perforation
  - **Permanently discontinue**
- Grade 3 or 4 bleeding
  - **Permanently discontinue**

#### SELECT IMPORTANT SAFETY INFORMATION

##### Gastrointestinal Perforations

- CYRAMZA is an antiangiogenic therapy that can increase the risk of gastrointestinal perforation, a potentially fatal event. Four of 570 patients (0.7%) who received CYRAMZA as a single agent in advanced gastric cancer clinical trials experienced gastrointestinal perforation. In study 2, the incidence of gastrointestinal perforation was 1.2% for CYRAMZA plus paclitaxel as compared to 0.3% for placebo plus paclitaxel. In study 3, the incidence of gastrointestinal perforation was 1% for CYRAMZA plus docetaxel as compared to 0.3% for placebo plus docetaxel. In study 4, the incidence of gastrointestinal perforation was 1.7% for CYRAMZA plus FOLFIRI and 0.6% for placebo plus FOLFIRI. Permanently discontinue CYRAMZA in patients who experience a gastrointestinal perforation.

Please see Important Safety Information, including Boxed Warning for hemorrhage, gastrointestinal perforation, and impaired wound healing, on pages 14-18 and accompanying full [Prescribing Information](#) for CYRAMZA.



**CYRAMZA**<sup>®</sup>  
ramucirumab injection  
10 mg/mL solution



## Metastatic Non-Small Cell Lung Cancer CYRAMZA Billing and Coding Information, Continued

CYRAMZA, in combination with docetaxel, is indicated for the treatment of patients with metastatic NSCLC with disease progression on or after platinum-based chemotherapy. Patients with EGFR or ALK genomic tumor aberrations should have disease progression on FDA-approved therapy for these aberrations prior to receiving CYRAMZA.

**All coding and documentation requirements for drugs should be confirmed with each payer.**

### Diagnosis Codes for NSCLC

ICD-10 Code*	Description
	Malignant neoplasm of:
C33	Trachea
C34.00	Unspecified main bronchus
C34.01	Right main bronchus
C34.02	Left main bronchus
C34.10	Upper lobe, unspecified bronchus or lung
C34.11	Upper lobe, right bronchus or lung
C34.12	Upper lobe, left bronchus or lung
C34.2	Middle lobe, bronchus or lung
C34.30	Lower lobe, unspecified bronchus or lung
C34.31	Lower lobe, right bronchus or lung
C34.32	Lower lobe, left bronchus or lung
C34.80	Overlapping sites of unspecified bronchus and lung
C34.81	Overlapping sites of right bronchus and lung
C34.82	Overlapping sites of left bronchus and lung
C34.90	Unspecified part of unspecified bronchus or lung
C34.91	Unspecified part of right bronchus or lung
C34.92	Unspecified part of left bronchus or lung

\*Please check to ensure that codes are used to the highest level of specificity.

### SELECT IMPORTANT SAFETY INFORMATION

#### Impaired Wound Healing

- Impaired wound healing can occur with antibodies inhibiting the VEGF pathway. CYRAMZA has not been studied in patients with serious or nonhealing wounds. CYRAMZA, an antiangiogenic therapy, has the potential to adversely affect wound healing. Discontinue CYRAMZA therapy in patients with impaired wound healing. Withhold CYRAMZA prior to surgery. Resume CYRAMZA following the surgical intervention based on clinical judgment of adequate wound healing. If a patient develops wound healing complications during therapy, discontinue CYRAMZA until the wound is fully healed.

Please see Important Safety Information, including Boxed Warning for hemorrhage, gastrointestinal perforation, and impaired wound healing, on pages 14-18 and accompanying full [Prescribing Information](#) for CYRAMZA.





## Metastatic Non-Small Cell Lung Cancer CYRAMZA Billing and Coding Information, Continued

CYRAMZA, in combination with docetaxel, is indicated for the treatment of patients with metastatic NSCLC with disease progression on or after platinum-based chemotherapy. Patients with EGFR or ALK genomic tumor aberrations should have disease progression on FDA-approved therapy for these aberrations prior to receiving CYRAMZA.

**All coding and documentation requirements for drugs should be confirmed with each payer.**

### HCPCS Codes

CYRAMZA Specific Code	Description	Setting
<b>J9308</b>	<b>Injection, ramucirumab, 5 mg</b>	<b>Physician office</b>
C9025	Injection, ramucirumab, 5 mg	Hospital outpatient

**Effective January 1, 2016, CYRAMZA-specific J-Code.** The Centers for Medicare & Medicaid Services assigned a 5-mg billing unit for CYRAMZA. Please confirm specific billing requirements, including wastage, with each individual payer.

The C-Code will be discontinued for dates of service after December 31, 2015.

### NDC

Vial Size	NDC*
100 mg/10 mL	<b>00002-7669-01</b>
500 mg/50 mL	<b>00002-7678-01</b>

### Drug Administration CPT Code

CPT Code	Description
96413	Chemotherapy administration, intravenous infusion technique; up to 1 hour, single or initial substance/drug

\*FDA standard NDC has been "zero-filled" to ensure creation of an 11-digit code that meets HIPAA standards. The zero-fill location is indicated in bold.

## SELECT IMPORTANT SAFETY INFORMATION

### Clinical Deterioration in Child-Pugh B or C Cirrhosis

- Clinical deterioration, manifested by new onset or worsening encephalopathy, ascites, or hepatorenal syndrome, was reported in patients with Child-Pugh B or C cirrhosis who received single-agent CYRAMZA. Use CYRAMZA in patients with Child-Pugh B or C cirrhosis only if the potential benefits of treatment are judged to outweigh the risks of clinical deterioration.

Please see Important Safety Information, including Boxed Warning for hemorrhage, gastrointestinal perforation, and impaired wound healing, on pages 14-18 and accompanying full [Prescribing Information](#) for CYRAMZA.





## Metastatic Colorectal Cancer

### CYRAMZA Billing and Coding Information

CYRAMZA, in combination with FOLFIRI (irinotecan, folinic acid, and 5-fluorouracil), is indicated for the treatment of patients with mCRC with disease progression on or after prior therapy with bevacizumab, oxaliplatin, and a fluoropyrimidine.

#### **CYRAMZA Is Administered in Combination With FOLFIRI for Second-Line Therapy for Patients With mCRC**

CYRAMZA is available in 100 mg/10 mL and 500 mg/50 mL (10 mg/mL) solution, single-dose vials.

#### **CYRAMZA Dosing**

- The recommended dose of CYRAMZA is 8 mg/kg every 2 weeks administered as an IV infusion over 60 minutes, prior to FOLFIRI administration
- For IV infusion only. Do not administer as an IV push or bolus. Continue CYRAMZA until disease progression or unacceptable toxicity
- See Prescribing Information for folinic acid, fluorouracil, and irinotecan for FOLFIRI premedication and dose administration instructions

#### **Premedication for CYRAMZA**

- Prior to each CYRAMZA infusion, premedicate all patients with an IV histamine H<sub>1</sub> antagonist (eg, diphenhydramine hydrochloride)
- For patients who have experienced a grade 1 or 2 IRR, also premedicate with dexamethasone (or equivalent) and acetaminophen prior to each CYRAMZA infusion

### **SELECT IMPORTANT SAFETY INFORMATION**

#### **Infusion-Related Reactions (IRRs)**

- Prior to the institution of premedication recommendations across clinical trials of CYRAMZA, IRRs occurred in 6 out of 37 patients (16%), including 2 severe events. The majority of IRRs across trials occurred during or following a first or second CYRAMZA infusion. Symptoms of IRRs included rigors/tremors, back pain/spasms, chest pain and/or tightness, chills, flushing, dyspnea, wheezing, hypoxia, and paresthesia. In severe cases, symptoms included bronchospasm, supraventricular tachycardia, and hypotension. Monitor patients during the infusion for signs and symptoms of IRRs in a setting with available resuscitation equipment. Immediately and permanently discontinue CYRAMZA for grade 3 or 4 IRRs.

Please see Important Safety Information, including Boxed Warning for hemorrhage, gastrointestinal perforation, and impaired wound healing, on pages 14-18 and accompanying full [Prescribing Information](#) for CYRAMZA.



**CYRAMZA**<sup>®</sup>  
ramucirumab injection  
10 mg/mL solution



## Metastatic Colorectal Cancer

### CYRAMZA Billing and Coding Information, Continued

CYRAMZA, in combination with FOLFIRI (irinotecan, folinic acid, and 5-fluorouracil), is indicated for the treatment of patients with mCRC with disease progression on or after prior therapy with bevacizumab, oxaliplatin, and a fluoropyrimidine.

#### Dose Modifications for CYRAMZA

- Infusion-related reactions
  - **Reduce infusion rate by 50%** for grade 1 or 2
  - **Permanently discontinue** for grade 3 or 4
- Hypertension
  - **Interrupt CYRAMZA** for severe hypertension until controlled with medical management
  - **Permanently discontinue** if severe hypertension cannot be controlled with antihypertensive therapy
- Proteinuria
  - **Interrupt CYRAMZA** for urine protein levels  $\geq 2$  g/24 h. Reinitiate treatment at a reduced dose of 6 mg/kg every 2 weeks once the urine protein level returns to  $< 2$  g/24 h. If the urine protein level  $\geq 2$  g/24 h reoccurs, interrupt CYRAMZA and reduce the dose to 5 mg/kg every 2 week once the urine protein level returns to  $< 2$  g/24 h
  - **Permanently discontinue** if urine protein level  $> 3$  g/24 h or in the setting of nephrotic syndrome
- Wound healing complications
  - **Interrupt CYRAMZA** prior to scheduled surgery until the wound is fully healed
- Arterial thromboembolic events
  - **Permanently discontinue**
- Gastrointestinal perforation
  - **Permanently discontinue**
- Grade 3 or 4 bleeding
  - **Permanently discontinue**

#### SELECT IMPORTANT SAFETY INFORMATION

##### Reversible Posterior Leukoencephalopathy Syndrome (RPLS)

- RPLS has been reported at a rate of  $< 0.1\%$  in clinical studies with CYRAMZA. Confirm the diagnosis of RPLS with MRI and discontinue CYRAMZA in patients who develop RPLS. Symptoms may resolve or improve within days, although some patients with RPLS can experience ongoing neurologic sequelae or death.

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## Metastatic Colorectal Cancer

### CYRAMZA Billing and Coding Information, Continued

CYRAMZA, in combination with FOLFIRI (irinotecan, folinic acid, and 5-fluorouracil), is indicated for the treatment of patients with mCRC with disease progression on or after prior therapy with bevacizumab, oxaliplatin, and a fluoropyrimidine.

**All coding and documentation requirements for drugs should be confirmed with each payer.**

#### Diagnosis Codes for CRC

ICD-10 Code*	Description
	Malignant neoplasm of:
C18.0	Cecum
C18.1	Appendix
C18.2	Ascending colon
C18.3	Hepatic flexure
C18.4	Transverse colon
C18.5	Splenic flexure
C18.6	Descending colon
C18.7	Sigmoid colon
C18.8	Overlapping sites of colon
C18.9	Colon, unspecified
C19	Rectosigmoid junction
C20	Rectum
C21.8	Overlapping sites of rectum, anus, and anal canal

\*Please check to ensure that codes are used to the highest level of specificity.

### SELECT IMPORTANT SAFETY INFORMATION

#### Proteinuria Including Nephrotic Syndrome

- In study 4, severe proteinuria occurred more frequently in patients treated with CYRAMZA plus FOLFIRI compared to patients receiving placebo plus FOLFIRI. Severe proteinuria was reported in 3% of patients treated with CYRAMZA plus FOLFIRI (including 3 cases [0.6%] of nephrotic syndrome) compared to 0.2% of patients treated with placebo plus FOLFIRI. Monitor proteinuria by urine dipstick and/or urinary protein creatinine ratio for the development of worsening of proteinuria during CYRAMZA therapy. Withhold CYRAMZA for urine protein levels that are  $\geq 2$  g over 24 hours. Reinitiate CYRAMZA at a reduced dose once the urine protein level returns to  $< 2$  g over 24 hours. Permanently discontinue CYRAMZA for urine protein levels  $> 3$  g over 24 hours or in the setting of nephrotic syndrome.

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## Metastatic Colorectal Cancer

### CYRAMZA Billing and Coding Information, Continued

CYRAMZA, in combination with FOLFIRI (irinotecan, folinic acid, and 5-fluorouracil), is indicated for the treatment of patients with mCRC with disease progression on or after prior therapy with bevacizumab, oxaliplatin, and a fluoropyrimidine.

**All coding and documentation requirements for drugs should be confirmed with each payer.**

#### HCPCS Codes

CYRAMZA Specific Code	Description	Setting
<b>J9308</b>	<b>Injection, ramucirumab, 5 mg</b>	<b>Physician office</b>
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#### NDC

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### SELECT IMPORTANT SAFETY INFORMATION

#### Thyroid Dysfunction

- Monitor thyroid function during treatment with CYRAMZA. In study 4, the incidence of hypothyroidism reported as an adverse event was 2.6% in the CYRAMZA plus FOLFIRI treated patients and 0.9% in the placebo plus FOLFIRI treated patients.

#### Embryofetal Toxicity

- Based on its mechanism of action, CYRAMZA can cause fetal harm when administered to pregnant women. Animal models link angiogenesis, VEGF, and VEGF Receptor 2 (VEGFR2) to critical aspects of female reproduction, embryofetal development, and postnatal development. Advise pregnant women of the potential risk to a fetus. Advise females of reproductive potential to use effective contraception during treatment with CYRAMZA and for at least 3 months after the last dose of CYRAMZA.

Please see Important Safety Information, including Boxed Warning for hemorrhage, gastrointestinal perforation, and impaired wound healing, on pages 14-18 and accompanying full [Prescribing Information](#) for CYRAMZA.



## IMPORTANT SAFETY INFORMATION FOR CYRAMZA

### **WARNING: HEMORRHAGE, GASTROINTESTINAL PERFORATION, AND IMPAIRED WOUND HEALING**

**Hemorrhage:** CYRAMZA increased the risk of hemorrhage and gastrointestinal hemorrhage, including severe and sometimes fatal hemorrhagic events. Permanently discontinue CYRAMZA in patients who experience severe bleeding.

**Gastrointestinal Perforation:** CYRAMZA can increase the risk of gastrointestinal perforation, a potentially fatal event. Permanently discontinue CYRAMZA in patients who experience a gastrointestinal perforation.

**Impaired Wound Healing:** Impaired wound healing can occur with antibodies inhibiting the VEGF pathway. Discontinue CYRAMZA therapy in patients with impaired wound healing. Withhold CYRAMZA prior to surgery and discontinue CYRAMZA if a patient develops wound healing complications.

## Warnings and Precautions

### Hemorrhage

- In study 1, which evaluated CYRAMZA as a single agent in advanced gastric cancer, the incidence of severe bleeding was 3.4% for CYRAMZA and 2.6% for placebo. In study 2, which evaluated CYRAMZA plus paclitaxel in advanced gastric cancer, the incidence of severe bleeding was 4.3% for CYRAMZA plus paclitaxel and 2.4% for placebo plus paclitaxel. Patients with gastric cancer receiving nonsteroidal anti-inflammatory drugs (NSAIDs) were excluded from enrollment in studies 1 and 2. In study 3, which evaluated CYRAMZA plus docetaxel in metastatic non-small cell lung cancer (NSCLC), the incidence of severe bleeding was 2.4% for CYRAMZA plus docetaxel and 2.3% for placebo plus docetaxel. Patients with NSCLC receiving therapeutic anticoagulation or chronic therapy with NSAIDs or other antiplatelet therapy other than once-daily aspirin or with radiographic evidence of major airway or blood vessel invasion or intratumor cavitation were excluded from study 3. In study 4, which evaluated CYRAMZA plus FOLFIRI in metastatic colorectal cancer, the incidence of severe bleeding was 2.5% for CYRAMZA plus FOLFIRI and 1.7% for placebo plus FOLFIRI. Permanently discontinue CYRAMZA in patients who experience severe bleeding.

### Arterial Thromboembolic Events (ATEs)

- Serious, sometimes fatal, ATEs including myocardial infarction, cardiac arrest, cerebrovascular accident, and cerebral ischemia occurred in clinical trials. Permanently discontinue CYRAMZA in patients who experience a severe ATE.

### Hypertension

- An increased incidence of severe hypertension occurred in patients receiving CYRAMZA as a single agent (8%) as compared to placebo (3%), in patients receiving CYRAMZA plus paclitaxel (15%) as compared to placebo plus paclitaxel (3%), and in patients receiving CYRAMZA plus docetaxel (6%) as compared to placebo plus docetaxel (2%), and in patients receiving CYRAMZA plus FOLFIRI (11%) as compared to placebo plus FOLFIRI (3%). Monitor blood pressure every 2 weeks or more frequently as indicated during treatment. Temporarily suspend CYRAMZA for severe hypertension until medically controlled. Permanently discontinue CYRAMZA if medically significant hypertension cannot be controlled with antihypertensive therapy or in patients with hypertensive crisis or hypertensive encephalopathy.

Please see Important Safety Information, including Boxed Warning for hemorrhage, gastrointestinal perforation, and impaired wound healing, continued on pages 15-18 and accompanying full [Prescribing Information](#) for CYRAMZA.



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10 mg/mL solution

## IMPORTANT SAFETY INFORMATION FOR CYRAMZA, CONTINUED

### Infusion-Related Reactions (IRRs)

- Prior to the institution of premedication recommendations across clinical trials of CYRAMZA, IRRs occurred in 6 out of 37 patients (16%), including 2 severe events. The majority of IRRs across trials occurred during or following a first or second CYRAMZA infusion. Monitor patients during the infusion for signs and symptoms of IRRs in a setting with available resuscitation equipment. Immediately and permanently discontinue CYRAMZA for grade 3 or 4 IRRs.

### Gastrointestinal Perforations

- Four of 570 patients (0.7%) who received CYRAMZA as a single agent in advanced gastric cancer clinical trials experienced gastrointestinal perforation. In study 2, the incidence of gastrointestinal perforation was 1.2% for CYRAMZA plus paclitaxel as compared to 0.3% for placebo plus paclitaxel. In study 3, the incidence of gastrointestinal perforation was 1% for CYRAMZA plus docetaxel as compared to 0.3% for placebo plus docetaxel. In study 4, the incidence of gastrointestinal perforation was 1.7% for CYRAMZA plus FOLFIRI and 0.6% for placebo plus FOLFIRI. Permanently discontinue CYRAMZA in patients who experience a gastrointestinal perforation.

### Impaired Wound Healing

- CYRAMZA has not been studied in patients with serious or nonhealing wounds. CYRAMZA has the potential to adversely affect wound healing. Discontinue CYRAMZA therapy in patients with impaired wound healing. Withhold CYRAMZA prior to surgery. Resume CYRAMZA following the surgical intervention based on clinical judgment of adequate wound healing. If a patient develops wound healing complications during therapy, discontinue CYRAMZA until the wound is fully healed.

### Clinical Deterioration in Child-Pugh B or C Cirrhosis

- Clinical deterioration, manifested by new onset or worsening encephalopathy, ascites, or hepatorenal syndrome, was reported in patients with Child-Pugh B or C cirrhosis who received single-agent CYRAMZA.

### Reversible Posterior Leukoencephalopathy Syndrome (RPLS)

- RPLS has been reported at a rate of <0.1% in clinical studies with CYRAMZA. Discontinue CYRAMZA in patients who develop RPLS. Symptoms may resolve or improve within days, although some patients with RPLS can experience ongoing neurologic sequelae or death.

### Proteinuria Including Nephrotic Syndrome

- In study 4, severe proteinuria occurred more frequently in patients treated with CYRAMZA plus FOLFIRI compared to patients receiving placebo plus FOLFIRI. Severe proteinuria was reported in 3% of patients treated with CYRAMZA plus FOLFIRI (including 3 cases [0.6%] of nephrotic syndrome) compared to 0.2% of patients treated with placebo plus FOLFIRI. Monitor proteinuria by urine dipstick and/or urinary protein creatinine ratio for the development of worsening of proteinuria during CYRAMZA therapy. Withhold CYRAMZA for urine protein levels that are  $\geq 2$  g over 24 hours. Reinitiate CYRAMZA at a reduced dose once the urine protein level returns to <2 g over 24 hours. Permanently discontinue CYRAMZA for urine protein levels >3 g over 24 hours or in the setting of nephrotic syndrome.

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## IMPORTANT SAFETY INFORMATION FOR CYRAMZA, CONTINUED

### Thyroid Dysfunction

- Monitor thyroid function during treatment with CYRAMZA. In study 4, the incidence of hypothyroidism reported as an adverse event was 2.6% in the CYRAMZA plus FOLFIRI-treated patients and 0.9% in the placebo plus FOLFIRI-treated patients.

### Embryofetal Toxicity

- Based on its mechanism of action, CYRAMZA can cause fetal harm when administered to pregnant women. Animal models link angiogenesis, VEGF, and VEGF Receptor 2 (VEGFR2) to critical aspects of female reproduction, embryofetal development, and postnatal development. Advise pregnant women of the potential risk to a fetus. Advise females of reproductive potential to use effective contraception during treatment with CYRAMZA and for at least 3 months after the last dose of CYRAMZA.

### Most Common Adverse Reactions—Single Agent

- The most commonly reported adverse reactions (all grades; grade 3/4) occurring in  $\geq 5\%$  of patients receiving CYRAMZA and  $\geq 2\%$  higher than placebo in study 1 were hypertension (16% vs 8%; 8% vs 3%), diarrhea (14% vs 9%; 1% vs 2%), headache (9% vs 3%; 0% vs 0%), and hyponatremia (6% vs 2%; 3% vs 1%).
- The most common serious adverse events with CYRAMZA in study 1 were anemia (3.8%) and intestinal obstruction (2.1%). Red blood cell transfusions were given to 11% of CYRAMZA-treated patients vs 8.7% of patients who received placebo.
- Clinically relevant adverse reactions reported in  $\geq 1\%$  and  $< 5\%$  of CYRAMZA-treated patients vs placebo in study 1 were: neutropenia (4.7% vs 0.9%), epistaxis (4.7% vs 0.9%), rash (4.2% vs 1.7%), intestinal obstruction (2.1% vs 0%), and arterial thromboembolic events (1.7% vs 0%).
- Across clinical trials of CYRAMZA administered as a single agent, clinically relevant adverse reactions (including grade  $\geq 3$ ) reported in CYRAMZA-treated patients included proteinuria, gastrointestinal perforation, and infusion-related reactions. In study 1, according to laboratory assessment, 8% of CYRAMZA-treated patients developed proteinuria vs 3% of placebo-treated patients. Two patients discontinued CYRAMZA due to proteinuria. The rate of gastrointestinal perforation in study 1 was 0.8% and the rate of infusion-related reactions was 0.4%.

### Most Common Adverse Reactions—Combination With Paclitaxel

- The most commonly reported adverse reactions (all grades; grade 3/4) occurring in  $\geq 5\%$  of patients receiving CYRAMZA plus paclitaxel and  $\geq 2\%$  higher than placebo plus paclitaxel in study 2 were fatigue/asthenia (57% vs 44%; 12% vs 6%), neutropenia (54% vs 31%; 41% vs 19%), diarrhea (32% vs 23%; 4% vs 2%), epistaxis (31% vs 7%; 0% vs 0%), hypertension (25% vs 6%; 15% vs 3%), peripheral edema (25% vs 14%; 2% vs 1%), stomatitis (20% vs 7%; 1% vs 1%), proteinuria (17% vs 6%; 1% vs 0%), thrombocytopenia (13% vs 6%; 2% vs 2%), hypoalbuminemia (11% vs 5%; 1% vs 1%), and gastrointestinal hemorrhage events (10% vs 6%; 4% vs 2%).
- The most common serious adverse events with CYRAMZA plus paclitaxel in study 2 were neutropenia (3.7%) and febrile neutropenia (2.4%); 19% of patients treated with CYRAMZA plus paclitaxel received granulocyte colony-stimulating factors.
- Adverse reactions resulting in discontinuation of any component of the CYRAMZA plus paclitaxel combination in 2% or more patients in study 2 were neutropenia (4%) and thrombocytopenia (3%).
- Clinically relevant adverse reactions reported in  $\geq 1\%$  and  $< 5\%$  of the CYRAMZA plus paclitaxel-treated patients in study 2 were sepsis (3.1% for CYRAMZA plus paclitaxel vs 1.8% for placebo plus paclitaxel) and gastrointestinal perforations (1.2% for CYRAMZA plus paclitaxel vs 0.3% for placebo plus paclitaxel).

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## IMPORTANT SAFETY INFORMATION FOR CYRAMZA, CONTINUED

### Most Common Adverse Reactions—Combination With Docetaxel

- The most commonly reported adverse reactions (all grades; grade 3/4) occurring in  $\geq 5\%$  of patients receiving CYRAMZA plus docetaxel and  $\geq 2\%$  higher than placebo plus docetaxel in study 3 were neutropenia (55% vs 46%; 49% vs 40%), fatigue/asthenia (55% vs 50%; 14% vs 11%), stomatitis/mucosal inflammation (37% vs 19%; 7% vs 2%), epistaxis (19% vs 7%;  $<1\%$  vs  $<1\%$ ), febrile neutropenia (16% vs 10%; 16% vs 10%), peripheral edema (16% vs 9%; 0% vs  $<1\%$ ), thrombocytopenia (13% vs 5%; 3% vs  $<1\%$ ), lacrimation increased (13% vs 5%;  $<1\%$  vs 0%), and hypertension (11% vs 5%; 6% vs 2%).
- The most common serious adverse events with CYRAMZA plus docetaxel in study 3 were febrile neutropenia (14%), pneumonia (6%), and neutropenia (5%). The use of granulocyte colony-stimulating factors was 42% in CYRAMZA plus docetaxel-treated patients versus 37% in patients who received placebo plus docetaxel.
- In patients  $\geq 65$  years of age, there were 18 (8%) deaths on treatment or within 30 days of discontinuation for CYRAMZA plus docetaxel and 9 (4%) deaths for placebo plus docetaxel. In patients  $< 65$  years of age, there were 13 (3%) deaths on treatment or within 30 days of discontinuation for CYRAMZA plus docetaxel and 26 (6%) deaths for placebo plus docetaxel.
- Treatment discontinuation due to adverse reactions occurred more frequently in CYRAMZA plus docetaxel-treated patients (9%) than in placebo plus docetaxel-treated patients (5%). The most common adverse events leading to treatment discontinuation of CYRAMZA in study 3 were infusion-related reaction (0.5%) and epistaxis (0.3%).
- For patients with nonsquamous histology, the overall incidence of pulmonary hemorrhage was 7% and the incidence of grade  $\geq 3$  pulmonary hemorrhage was 1% for CYRAMZA plus docetaxel compared to 6% overall incidence and 1% for grade  $\geq 3$  pulmonary hemorrhage for placebo plus docetaxel. For patients with squamous histology, the overall incidence of pulmonary hemorrhage was 10% and the incidence of grade  $\geq 3$  pulmonary hemorrhage was 2% for CYRAMZA plus docetaxel compared to 12% overall incidence and 2% for grade  $\geq 3$  pulmonary hemorrhage for placebo plus docetaxel.
- Clinically relevant adverse reactions reported in  $\geq 1\%$  and  $< 5\%$  of CYRAMZA plus docetaxel-treated patients in study 3 were hyponatremia (4.8% CYRAMZA plus docetaxel versus 2.4% for placebo plus docetaxel) and proteinuria (3.3% CYRAMZA plus docetaxel versus 0.8% placebo plus docetaxel).

### Most Common Adverse Reactions—Combination With FOLFIRI

- The most commonly reported adverse reactions (all grades; grade 3/4) occurring in  $\geq 5\%$  of patients receiving CYRAMZA plus FOLFIRI and  $\geq 2\%$  higher than placebo plus FOLFIRI in study 4 were diarrhea (60% vs 51%; 11% vs 10%), neutropenia (59% vs 46%; 38% vs 23%), decreased appetite (37% vs 27%; 2% vs 2%), epistaxis (33% vs 15%; 0% vs 0%), stomatitis (31% vs 21%; 4% vs 2%), thrombocytopenia (28% vs 14%; 3% vs  $<1\%$ ), hypertension (26% vs 9%; 11% vs 3%), peripheral edema (20% vs 9%;  $<1\%$  vs 0%), proteinuria (17% vs 5%; 3% vs  $<1\%$ ), palmar-plantar erythrodysesthesia syndrome (13% vs 5%; 1% vs  $<1\%$ ), gastrointestinal hemorrhage events (12% vs 7%; 2% vs 1%), hypoalbuminemia (6% vs 2%; 1% vs 0%). Twenty percent of patients treated with CYRAMZA plus FOLFIRI received granulocyte colony-stimulating factors.
- The most common serious adverse events with CYRAMZA plus FOLFIRI were diarrhea (3.6%), intestinal obstruction (3.0%), and febrile neutropenia (2.8%).
- Treatment discontinuation of any study drug due to adverse reactions occurred more frequently in CYRAMZA plus FOLFIRI-treated patients (29%) than in placebo plus FOLFIRI-treated patients (13%). The most common adverse reactions leading to discontinuation of any component of CYRAMZA plus FOLFIRI as compared to placebo plus FOLFIRI were neutropenia (12.5% versus 5.3%) and thrombocytopenia (4.2% versus 0.8%). The most common adverse reactions leading to treatment discontinuation of CYRAMZA were proteinuria (1.5%) and gastrointestinal perforation (1.7%).

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## IMPORTANT SAFETY INFORMATION FOR CYRAMZA, CONTINUED

### Most Common Adverse Reactions—Combination With FOLFIRI, Continued

- Clinically relevant adverse reactions reported in  $\geq 1\%$  and  $< 5\%$  of CYRAMZA plus FOLFIRI-treated patients in study 4 consisted of gastrointestinal perforation (1.7% CYRAMZA plus FOLFIRI versus 0.6% for placebo plus FOLFIRI).
- Thyroid-stimulating hormone (TSH) was evaluated in 224 patients (115 CYRAMZA plus FOLFIRI-treated patients and 109 placebo plus FOLFIRI-treated patients) with normal baseline TSH levels. Increased TSH was observed in 53 (46%) patients treated with CYRAMZA plus FOLFIRI compared with 4 (4%) patients treated with placebo plus FOLFIRI.

### Drug Interactions

- No pharmacokinetic interactions were observed between ramucirumab and paclitaxel, between ramucirumab and docetaxel, or between ramucirumab and irinotecan or its active metabolite, SN-38.

### Use in Specific Populations

- **Pregnancy:** Based on its mechanism of action, CYRAMZA can cause fetal harm. Animal models link angiogenesis, VEGF, and VEGF Receptor 2 (VEGFR2) to critical aspects of female reproduction, embryofetal development, and postnatal development. There are no available data on CYRAMZA use in pregnant women to inform any drug-associated risks. No animal studies have been conducted to evaluate the effect of ramucirumab on reproduction and fetal development. Advise females of reproductive potential of the potential risk for maintaining pregnancy, risk to the fetus, and risk to newborn and pediatric development, and to use effective contraception during CYRAMZA therapy and for at least 3 months following the last dose of CYRAMZA.
- **Lactation:** Because of the potential risk for serious adverse reactions in nursing infants from ramucirumab, advise women that breastfeeding is not recommended during treatment with CYRAMZA.
- **Females of Reproductive Potential:** Advise females of reproductive potential that based on animal data CYRAMZA may impair fertility.

**Please see full [Prescribing Information](#) for CYRAMZA, including Boxed Warning for hemorrhage, gastrointestinal perforation, and impaired wound healing.**

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