

HIGHLIGHTS OF PRESCRIBING INFORMATION

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

PROMACTA (eltrombopag) tablets, for oral use
Initial U.S. Approval: 2008

WARNING: RISK FOR HEPATIC DECOMPENSATION IN PATIENTS WITH CHRONIC HEPATITIS C

See full prescribing information for complete boxed warning.

In patients with chronic hepatitis C, PROMACTA in combination with interferon and ribavirin may increase the risk of hepatic decompensation. (5.1)

RECENT MAJOR CHANGES

Indications and Usage, Treatment of Thrombocytopenia in Patients with Chronic ITP (1.1)	06/2015
Indications and Usage, Treatment of Severe Aplastic Anemia (1.3)	08/2014
Dosage and Administration, Chronic Immune (Idiopathic) Thrombocytopenia (2.1)	06/2015
Dosage and Administration, Severe Aplastic Anemia (2.3)	08/2014

INDICATIONS AND USAGE

PROMACTA is a thrombopoietin receptor agonist indicated for the treatment of:

- thrombocytopenia in adult and pediatric patients 6 years and older with chronic immune (idiopathic) thrombocytopenia (ITP) who have had an insufficient response to corticosteroids, immunoglobulins, or splenectomy. (1.1)
- thrombocytopenia in patients with chronic hepatitis C to allow the initiation and maintenance of interferon-based therapy. (1.2)
- patients with severe aplastic anemia who have had an insufficient response to immunosuppressive therapy. (1.3)

Limitations of Use:

- PROMACTA should be used only in patients with ITP whose degree of thrombocytopenia and clinical condition increase the risk for bleeding. (1.4)
- PROMACTA should be used only in patients with chronic hepatitis C whose degree of thrombocytopenia prevents the initiation of interferon-based therapy or limits the ability to maintain interferon-based therapy. (1.4)
- Safety and efficacy have not been established in combination with direct-acting antiviral agents used without interferon for treatment of chronic hepatitis C infection. (1.4)

DOSAGE AND ADMINISTRATION

- Take on an empty stomach (1 hour before or 2 hours after a meal). (2.4)
- Chronic ITP:** Initiate PROMACTA at 50 mg once daily for most adult and pediatric patients 6 years and older. Reduce initial dose in patients with hepatic impairment and/or patients of East Asian ancestry. Adjust to maintain platelet count greater than or equal to $50 \times 10^9/L$. Do not exceed 75 mg per day. (2.1)

- Chronic Hepatitis C-associated Thrombocytopenia:** Initiate PROMACTA at 25 mg once daily for all patients. Adjust to achieve target platelet count required to initiate antiviral therapy. Do not exceed a daily dose of 100 mg. (2.2)
- Severe Aplastic Anemia:** Initiate PROMACTA at 50 mg once daily for most patients. Reduce initial dose in patients with hepatic impairment or patients of East Asian ancestry. Adjust to maintain platelet count greater than $50 \times 10^9/L$. Do not exceed 150 mg per day. (2.3)
- Hepatic Impairment:** Reduce the initial dose in patients with chronic ITP and hepatic impairment. (2.1, 8.6)

DOSAGE FORMS AND STRENGTHS

12.5-mg, 25-mg, 50-mg, 75-mg, and 100-mg tablets. (3)

CONTRAINDICATIONS

None. (4)

WARNINGS AND PRECAUTIONS

- Hepatotoxicity: Monitor liver function before and during therapy. (5.2)
- Thrombotic/Thromboembolic Complications: Portal vein thrombosis has been reported in patients with chronic liver disease receiving PROMACTA. Monitor platelet counts regularly. (5.3)

ADVERSE REACTIONS

- In adult patients with ITP, the most common adverse reactions (greater than or equal to 5% and greater than placebo) were: nausea, diarrhea, upper respiratory tract infection, vomiting, increased ALT, myalgia, and urinary tract infection. (6.1)
- In pediatric patients age 6 years and older with ITP, the most common adverse reactions (greater than or equal to 10% and greater than placebo) were upper respiratory tract infection, nasopharyngitis, and rhinitis. (6.1)
- In patients with chronic hepatitis C-associated thrombocytopenia, the most common adverse reactions (greater than or equal to 10% and greater than placebo) were: anemia, pyrexia, fatigue, headache, nausea, diarrhea, decreased appetite, influenza-like illness, asthenia, insomnia, cough, pruritus, chills, myalgia, alopecia, and peripheral edema. (6.1)
- In patients with severe aplastic anemia, the most common adverse reactions (greater than or equal to 20%) were: nausea, fatigue, cough, diarrhea, and headache. (6.1)

To report SUSPECTED ADVERSE REACTIONS, contact GlaxoSmithKline at 1-888-825-5249 or FDA at 1-800-FDA-1088 or www.fda.gov/medwatch.

DRUG INTERACTIONS

PROMACTA must not be taken within 4 hours of any medications or products containing polyvalent cations such as antacids, calcium-rich foods, and mineral supplements. (2.4, 7.1)

USE IN SPECIFIC POPULATIONS

- Pregnancy:** Based on animal data, PROMACTA may cause fetal harm. (8.1)
- Nursing Mothers:** A decision should be made to discontinue PROMACTA or nursing, taking into account the importance of PROMACTA to the mother. (8.3)

See 17 for PATIENT COUNSELING INFORMATION and Medication Guide.

Revised: 06/2015

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FULL PRESCRIBING INFORMATION

WARNING: RISK FOR HEPATIC DECOMPENSATION IN PATIENTS WITH CHRONIC HEPATITIS C

In patients with chronic hepatitis C, PROMACTA[®] in combination with interferon and ribavirin may increase the risk of hepatic decompensation [see Warnings and Precautions (5.1)].

1 INDICATIONS AND USAGE

1.1 Treatment of Thrombocytopenia in Patients with Chronic ITP

PROMACTA is indicated for the treatment of thrombocytopenia in adult and pediatric patients 6 years and older with chronic immune (idiopathic) thrombocytopenia (ITP) who have had an insufficient response to corticosteroids, immunoglobulins, or splenectomy.

1.2 Treatment of Thrombocytopenia in Patients with Hepatitis C Infection

PROMACTA is indicated for the treatment of thrombocytopenia in patients with chronic hepatitis C to allow the initiation and maintenance of interferon-based therapy.

1.3 Treatment of Severe Aplastic Anemia

PROMACTA is indicated for the treatment of patients with severe aplastic anemia who have had an insufficient response to immunosuppressive therapy.

1.4 Limitations of Use

- PROMACTA should be used only in patients with ITP whose degree of thrombocytopenia and clinical condition increase the risk for bleeding.
- PROMACTA should be used only in patients with chronic hepatitis C whose degree of thrombocytopenia prevents the initiation of interferon-based therapy or limits the ability to maintain interferon-based therapy.
- Safety and efficacy have not been established in combination with direct-acting antiviral agents used without interferon for treatment of chronic hepatitis C infection.

2 DOSAGE AND ADMINISTRATION

2.1 Chronic Immune (Idiopathic) Thrombocytopenia

Use the lowest dose of PROMACTA to achieve and maintain a platelet count greater than or equal to $50 \times 10^9/L$ as necessary to reduce the risk for bleeding. Dose adjustments are based upon the platelet count response. Do not use PROMACTA to normalize platelet counts [see Warnings and Precautions (5.3)]. In clinical trials, platelet counts generally increased within 1 to 2 weeks after starting PROMACTA and decreased within 1 to 2 weeks after discontinuing PROMACTA [see Clinical Studies (14.1)].

Initial Dose Regimen: Adult and Pediatric Patients 6 Years and Older with ITP: Initiate PROMACTA at a dose of 50 mg once daily, except in patients who are of East Asian ancestry (such as Chinese, Japanese, Taiwanese, or Korean) or who have mild to severe hepatic impairment (Child-Pugh Class A, B, C).

37 For patients of East Asian ancestry with ITP, initiate PROMACTA at a reduced dose of
38 25 mg once daily [see Use in Specific Populations (8.8), Clinical Pharmacology (12.3)].

39 For patients with ITP and mild, moderate, or severe hepatic impairment (Child-Pugh
40 Class A, B, C), initiate PROMACTA at a reduced dose of 25 mg once daily [see Use in Specific
41 Populations (8.6), Clinical Pharmacology (12.3)].

42 For patients of East Asian ancestry with ITP and hepatic impairment (Child-Pugh Class
43 A, B, C), consider initiating PROMACTA at a reduced dose of 12.5 mg once daily [see Clinical
44 Pharmacology (12.3)].

45 **Monitoring and Dose Adjustment:** After initiating PROMACTA, adjust the dose to
46 achieve and maintain a platelet count greater than or equal to $50 \times 10^9/L$ as necessary to reduce
47 the risk for bleeding. Do not exceed a dose of 75 mg daily. Monitor clinical hematology and liver
48 tests regularly throughout therapy with PROMACTA and modify the dosage regimen of
49 PROMACTA based on platelet counts as outlined in Table 1. During therapy with PROMACTA,
50 assess CBCs with differentials, including platelet counts, weekly until a stable platelet count has
51 been achieved. Obtain CBCs with differentials, including platelet counts, monthly thereafter.

52
53 **Table 1. Dose Adjustments of PROMACTA in Patients with Chronic Immune (Idiopathic)**
54 **Thrombocytopenia**

Platelet Count Result	Dose Adjustment or Response
< $50 \times 10^9/L$ following at least 2 weeks of PROMACTA	Increase daily dose by 25 mg to a maximum of 75 mg/day. For patients taking 12.5 mg once daily, increase the dose to 25 mg daily before increasing the dose amount by 25 mg.
$\geq 200 \times 10^9/L$ to $\leq 400 \times 10^9/L$ at any time	Decrease the daily dose by 25 mg. Wait 2 weeks to assess the effects of this and any subsequent dose adjustments. For patients taking 25 mg once daily, decrease the dose to 12.5 mg once daily.
> $400 \times 10^9/L$	Stop PROMACTA; increase the frequency of platelet monitoring to twice weekly. Once the platelet count is $<150 \times 10^9/L$, reinstitute therapy at a daily dose reduced by 25 mg. For patients taking 25 mg once daily, reinstitute therapy at a daily dose of 12.5 mg.
> $400 \times 10^9/L$ after 2 weeks of therapy at lowest dose of PROMACTA	Discontinue PROMACTA.

55
56 In patients with ITP and hepatic impairment (Child-Pugh Class A, B, C), after initiating
57 PROMACTA or after any subsequent dosing increase, wait 3 weeks before increasing the dose.

58 Modify the dosage regimen of concomitant ITP medications, as medically appropriate, to
59 avoid excessive increases in platelet counts during therapy with PROMACTA. Do not administer
60 more than one dose of PROMACTA within any 24-hour period.

61 Discontinuation: Discontinue PROMACTA if the platelet count does not increase to a
62 level sufficient to avoid clinically important bleeding after 4 weeks of therapy with
63 PROMACTA at the maximum daily dose of 75 mg. Excessive platelet count responses, as
64 outlined in Table 1, or important liver test abnormalities also necessitate discontinuation of
65 PROMACTA [see *Warnings and Precautions (5.2)*]. Obtain CBCs with differentials, including
66 platelet counts, weekly for at least 4 weeks following discontinuation of PROMACTA.

67 **2.2 Chronic Hepatitis C-associated Thrombocytopenia**

68 Use the lowest dose of PROMACTA to achieve and maintain a platelet count necessary
69 to initiate and maintain antiviral therapy with pegylated interferon and ribavirin. Dose
70 adjustments are based upon the platelet count response. Do not use PROMACTA to normalize
71 platelet counts [see *Warnings and Precautions (5.3)*]. In clinical trials, platelet counts generally
72 began to rise within the first week of treatment with PROMACTA [see *Clinical Studies (14.2)*].

73 Initial Dose Regimen: Initiate PROMACTA at a dose of 25 mg once daily.

74 Monitoring and Dose Adjustment: Adjust the dose of PROMACTA in 25-mg
75 increments every 2 weeks as necessary to achieve the target platelet count required to initiate
76 antiviral therapy. Monitor platelet counts every week prior to starting antiviral therapy.

77 During antiviral therapy, adjust the dose of PROMACTA to avoid dose reductions of
78 peginterferon. Monitor CBCs with differentials, including platelet counts, weekly during
79 antiviral therapy until a stable platelet count is achieved. Monitor platelet counts monthly
80 thereafter. Do not exceed a dose of 100 mg daily. Monitor clinical hematology and liver tests
81 regularly throughout therapy with PROMACTA.

82 **For specific dosage instructions for peginterferon or ribavirin, refer to their**
83 **respective prescribing information.**

84

85 **Table 2. Dose Adjustments of PROMACTA in Adults with Thrombocytopenia due to**
86 **Chronic Hepatitis C**

Platelet Count Result	Dose Adjustment or Response
<50 x 10 ⁹ /L following at least 2 weeks of PROMACTA	Increase daily dose by 25 mg to a maximum of 100 mg/day.
≥200 x 10 ⁹ /L to ≤400 x 10 ⁹ /L at any time	Decrease the daily dose by 25 mg. Wait 2 weeks to assess the effects of this and any subsequent dose adjustments.
>400 x 10 ⁹ /L	Stop PROMACTA; increase the frequency of platelet monitoring to twice weekly. Once the platelet count is <150 x 10 ⁹ /L, reinstitute therapy at a daily dose reduced by 25 mg. For patients taking 25 mg once daily, reinstitute therapy at a daily dose of 12.5 mg.
>400 x 10 ⁹ /L after 2 weeks of therapy at lowest dose of PROMACTA	Discontinue PROMACTA.

87

88 **Discontinuation:** The prescribing information for pegylated interferon and ribavirin
89 include recommendations for antiviral treatment discontinuation for treatment futility. Refer to
90 pegylated interferon and ribavirin prescribing information for discontinuation recommendations
91 for antiviral treatment futility.

92 PROMACTA should be discontinued when antiviral therapy is discontinued. Excessive
93 platelet count responses, as outlined in Table 2, or important liver test abnormalities also
94 necessitate discontinuation of PROMACTA [see *Warnings and Precautions (5.2)*].

95 **2.3 Severe Aplastic Anemia**

96 Use the lowest dose of PROMACTA to achieve and maintain a hematologic response.
97 Dose adjustments are based upon the platelet count. Hematologic response requires dose
98 titration, generally up to 150 mg, and may take up to 16 weeks after starting PROMACTA [see
99 *Clinical Studies (14.3)*].

100 **Initial Dose Regimen:** Initiate PROMACTA at a dose of 50 mg once daily.

101 For patients with severe aplastic anemia of East Asian ancestry or those with mild,
102 moderate, or severe hepatic impairment (Child-Pugh Class A, B, C), initiate PROMACTA at a
103 reduced dose of 25 mg once daily [see *Use in Specific Populations (8.6, 8.8)*, *Clinical*
104 *Pharmacology (12.3)*].

105 **Monitoring and Dose Adjustment:** Adjust the dose of PROMACTA in 50-mg
106 increments every 2 weeks as necessary to achieve the target platelet count greater than or equal
107 to 50 x 10⁹/L as necessary. Do not exceed a dose of 150 mg daily. Monitor clinical hematology

108 and liver tests regularly throughout therapy with PROMACTA and modify the dosage regimen
109 of PROMACTA based on platelet counts as outlined in Table 3.

110

111 **Table 3. Dose Adjustments of PROMACTA in Patients with Severe Aplastic Anemia**

Platelet Count Result	Dose Adjustment or Response
<50 x 10 ⁹ /L following at least 2 weeks of PROMACTA	Increase daily dose by 50 mg to a maximum of 150 mg/day. For patients taking 25 mg once daily, increase the dose to 50 mg daily before increasing the dose amount by 50 mg.
≥200 x 10 ⁹ /L to ≤400 x 10 ⁹ /L at any time	Decrease the daily dose by 50 mg. Wait 2 weeks to assess the effects of this and any subsequent dose adjustments.
>400 x 10 ⁹ /L	Stop PROMACTA for 1 week. Once the platelet count is <150 x 10 ⁹ /L, reinstitute therapy at a dose reduced by 50 mg.
>400 x 10 ⁹ /L after 2 weeks of therapy at lowest dose of PROMACTA	Discontinue PROMACTA.

112

113 For patients who achieve tri-lineage response, including transfusion independence,
114 lasting at least 8 weeks: the dose of PROMACTA may be reduced by 50% [see *Clinical Studies*
115 (14.3)]. If counts remain stable after 8 weeks at the reduced dose, then discontinue PROMACTA
116 and monitor blood counts. If platelet counts drop to less than 30 x 10⁹/L, hemoglobin to less than
117 9 g/dL, or ANC to less than 0.5 x 10⁹/L, PROMACTA may be reinitiated at the previous
118 effective dose.

119 **Discontinuation:** If no hematologic response has occurred after 16 weeks of therapy with
120 PROMACTA, discontinue therapy. If new cytogenetic abnormalities are observed, consider
121 discontinuation of PROMACTA [see *Adverse Reactions* (6.1)]. Excessive platelet count
122 responses (as outlined in Table 3) or important liver test abnormalities also necessitate
123 discontinuation of PROMACTA [see *Warnings and Precautions* (5.2)].

124 **2.4 Administration**

125 Take PROMACTA on an empty stomach (1 hour before or 2 hours after a meal) [see
126 *Clinical Pharmacology* (12.3)].

127 Allow at least a 4-hour interval between PROMACTA and other medications (e.g.,
128 antacids), calcium-rich foods (e.g., dairy products and calcium-fortified juices), or supplements
129 containing polyvalent cations such as iron, calcium, aluminum, magnesium, selenium, and zinc
130 [see *Drug Interactions* (7.1)].

131 **3 DOSAGE FORMS AND STRENGTHS**

- 132 • 12.5-mg tablets — round, biconvex, white, film-coated tablets debossed with GS MZ1 and
133 12.5 on one side. Each tablet, for oral administration, contains eltrombopag olamine,
134 equivalent to 12.5 mg of eltrombopag free acid.

- 135 • 25-mg tablets — round, biconvex, orange, film-coated tablets debossed with GS NX3 and
136 25 on one side. Each tablet, for oral administration, contains eltrombopag olamine,
137 equivalent to 25 mg of eltrombopag free acid.
- 138 • 50-mg tablets — round, biconvex, blue, film-coated tablets debossed with GS UFU and
139 50 on one side. Each tablet, for oral administration, contains eltrombopag olamine,
140 equivalent to 50 mg of eltrombopag free acid.
- 141 • 75-mg tablets — round, biconvex, pink, film-coated tablets debossed with GS FFS and 75 on
142 one side. Each tablet, for oral administration, contains eltrombopag olamine, equivalent to
143 75 mg of eltrombopag free acid.
- 144 • 100-mg tablets — round, biconvex, green, film-coated tablets debossed with GS 1L5. Each
145 tablet, for oral administration, contains eltrombopag olamine, equivalent to 100 mg of
146 eltrombopag free acid.

147 **4 CONTRAINDICATIONS**

148 None.

149 **5 WARNINGS AND PRECAUTIONS**

150 **5.1 Hepatic Decompensation in Patients with Chronic Hepatitis C**

151 In patients with chronic hepatitis C, PROMACTA in combination with interferon and
152 ribavirin may increase the risk of hepatic decompensation. In two controlled clinical trials in
153 patients with chronic hepatitis C and thrombocytopenia, ascites and encephalopathy occurred
154 more frequently on the arm receiving treatment with PROMACTA plus antivirals (7%) than the
155 placebo plus antivirals arm (4%). Patients with low albumin levels (less than 3.5 g/dL) or Model
156 for End-Stage Liver Disease (MELD) score greater than or equal to 10 at baseline had a greater
157 risk for hepatic decompensation on the arm receiving treatment with PROMACTA plus
158 antivirals. Discontinue PROMACTA if antiviral therapy is discontinued.

159 **5.2 Hepatotoxicity**

160 PROMACTA can cause liver enzyme elevations [*see Adverse Reactions (6.1)*]. Measure
161 serum ALT, AST, and bilirubin prior to initiation of PROMACTA, every 2 weeks during the
162 dose adjustment phase, and monthly following establishment of a stable dose. PROMACTA
163 inhibits UDP-glucuronosyltransferase (UGT)1A1 and organic anion-transporting polypeptide
164 (OATP)1B1, which may lead to indirect hyperbilirubinemia. If bilirubin is elevated, perform
165 fractionation. Evaluate abnormal serum liver tests with repeat testing within 3 to 5 days. If the
166 abnormalities are confirmed, monitor serum liver tests weekly until resolved or stabilized.
167 Discontinue PROMACTA if ALT levels increase to greater than or equal to 3 x ULN in patients
168 with normal liver function or greater than or equal to 3 x baseline in patients with pre-treatment
169 elevations in transaminases and are:

- 170 • progressively increasing, or
171 • persistent for greater than or equal to 4 weeks, or
172 • accompanied by increased direct bilirubin, or
173 • accompanied by clinical symptoms of liver injury or evidence for hepatic decompensation.

174 If the potential benefit for reinitiating treatment with PROMACTA is considered to
175 outweigh the risk for hepatotoxicity, then consider cautiously reintroducing PROMACTA and
176 measure serum liver tests weekly during the dose adjustment phase. Hepatotoxicity may reoccur
177 if PROMACTA is reinitiated. If liver test abnormalities persist, worsen, or recur, then
178 permanently discontinue PROMACTA.

179 **5.3 Thrombotic/Thromboembolic Complications**

180 In two controlled clinical trials in patients with chronic hepatitis C and
181 thrombocytopenia, 3% (31/955) treated with PROMACTA experienced a thrombotic event
182 compared with 1% (5/484) on placebo. The majority of events were of the portal venous system
183 (1% in patients treated with PROMACTA versus less than 1% for placebo).

184 Thrombotic/thromboembolic complications may result from increases in platelet counts
185 with PROMACTA. Reported thrombotic/thromboembolic complications included both venous
186 and arterial events and were observed at low and at normal platelet counts.

187 Consider the potential for an increased risk of thromboembolism when administering
188 PROMACTA to patients with known risk factors for thromboembolism (e.g., Factor V Leiden,
189 ATIII deficiency, antiphospholipid syndrome, chronic liver disease). To minimize the risk for
190 thrombotic/thromboembolic complications, do not use PROMACTA in an attempt to normalize
191 platelet counts. Follow the dose adjustment guidelines to achieve and maintain target platelet
192 counts [*see Dosage and Administration (2.1, 2.2, 2.3)*].

193 In a controlled trial in patients with chronic liver disease and thrombocytopenia not
194 related to ITP undergoing elective invasive procedures (N = 292), the risk of thrombotic events
195 was increased in patients treated with 75 mg of PROMACTA once daily. Seven thrombotic
196 complications (six patients) were reported in the group that received PROMACTA and three
197 thrombotic complications were reported in the placebo group (two patients). All of the
198 thrombotic complications reported in the group that received PROMACTA were portal vein
199 thrombosis (PVT). Symptoms of PVT included abdominal pain, nausea, vomiting, and diarrhea.
200 Five of the six patients in the group that received PROMACTA experienced a thrombotic
201 complication within 30 days of completing treatment with PROMACTA and at a platelet count
202 above $200 \times 10^9/L$. The risk of portal venous thrombosis was increased in thrombocytopenic
203 patients with chronic liver disease treated with 75 mg of PROMACTA once daily for 2 weeks in
204 preparation for invasive procedures.

205 **5.4 Cataracts**

206 In the three controlled clinical trials in adults with chronic ITP, cataracts developed or
207 worsened in 15 (7%) patients who received 50 mg of PROMACTA daily and 8 (7%) placebo-
208 group patients. In the extension trial, cataracts developed or worsened in 4% of patients who
209 underwent ocular examination prior to therapy with PROMACTA. In the two controlled clinical
210 trials in patients with chronic hepatitis C and thrombocytopenia, cataracts developed or worsened
211 in 8% patients treated with PROMACTA and 5% patients treated with placebo.

212 Cataracts were observed in toxicology studies of eltrombopag in rodents [*see Nonclinical*
213 *Toxicology (13.2)*]. Perform a baseline ocular examination prior to administration of

214 PROMACTA and, during therapy with PROMACTA, regularly monitor patients for signs and
215 symptoms of cataracts.

216 **6 ADVERSE REACTIONS**

217 The following serious adverse reactions associated with PROMACTA are described in
218 other sections.

- 219 • Hepatic Decompensation in Patients with Chronic Hepatitis C [*see Warnings and*
220 *Precautions (5.1)*]
- 221 • Hepatotoxicity [*see Warnings and Precautions (5.2)*]
- 222 • Thrombotic/Thromboembolic Complications [*see Warnings and Precautions (5.3)*]
- 223 • Cataracts [*see Warnings and Precautions (5.4)*]

224 **6.1 Clinical Trials Experience**

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

228 Chronic Immune (Idiopathic) Thrombocytopenia: Adults: In clinical trials,
229 hemorrhage was the most common serious adverse reaction and most hemorrhagic reactions
230 followed discontinuation of PROMACTA. Other serious adverse reactions included
231 thrombotic/thromboembolic complications [*see Warnings and Precautions (5.3)*]. The data
232 described below reflect exposure of PROMACTA to 446 patients with chronic ITP aged 18 to
233 85 years, of whom 65% were female, across the ITP clinical development program including
234 three placebo-controlled trials. PROMACTA was administered to 277 patients for at least
235 6 months and 202 patients for at least 1 year.

236 Table 4 presents the most common adverse drug reactions (experienced by greater than or
237 equal to 3% of patients receiving PROMACTA) from the three placebo-controlled trials, with a
238 higher incidence in PROMACTA versus placebo.

239

240 **Table 4. Adverse Reactions ($\geq 3\%$) from Three Placebo-controlled Trials in Adults with**
241 **Chronic Immune (Idiopathic) Thrombocytopenia**

Adverse Reaction	PROMACTA 50 mg n = 241 (%)	Placebo n = 128 (%)
Nausea	9	3
Diarrhea	9	7
Upper respiratory tract infection	7	6
Vomiting	6	<1
Increased ALT	5	3
Myalgia	5	2
Urinary tract infection	5	3
Oropharyngeal pain	4	3
Increased AST	4	2
Pharyngitis	4	2
Back pain	3	2
Influenza	3	2
Paresthesia	3	2
Rash	3	2

242

243 In the three controlled clinical chronic ITP trials, alopecia, musculoskeletal pain, blood
244 alkaline phosphatase increased, and dry mouth were the adverse reactions reported in 2% of
245 patients treated with PROMACTA and in no patients who received placebo.

246

247 Among 299 patients with chronic ITP who received PROMACTA in the single-arm
248 extension trial, the adverse reactions occurred in a pattern similar to that seen in the placebo-
249 controlled trials. Table 5 presents the most common treatment-related adverse reactions
250 (experienced by greater than or equal to 3% of patients receiving PROMACTA) from the
251 extension trial.

251

252 **Table 5. Treatment-related Adverse Reactions ($\geq 3\%$) from Extension Trial in Adults with**
253 **Chronic Immune (Idiopathic) Thrombocytopenia**

Adverse Reaction	PROMACTA 50 mg n = 299 (%)
Headache	10
Hyperbilirubinemia	6
ALT increased	6
Cataract	5
AST increased	4
Fatigue	4
Nausea	4

254
255 In the three controlled chronic ITP trials, serum liver test abnormalities (predominantly
256 Grade 2 or less in severity) were reported in 11% and 7% of patients for PROMACTA and
257 placebo, respectively. Four patients (1%) treated with PROMACTA and three patients in the
258 placebo group (2%) discontinued treatment due to hepatobiliary laboratory abnormalities. Seven
259 of the patients treated with PROMACTA in the controlled trials with hepatobiliary laboratory
260 abnormalities were re-exposed to PROMACTA in the extension trial. Six of these patients again
261 experienced liver test abnormalities (predominantly Grade 1) resulting in discontinuation of
262 PROMACTA in one patient. In the extension chronic ITP trial, one additional patient had
263 PROMACTA discontinued due to liver test abnormalities (less than or equal to Grade 3).

264 In a placebo-controlled trial of PROMACTA in patients with chronic liver disease and
265 thrombocytopenia not related to ITP, six patients treated with PROMACTA and one patient in
266 the placebo group developed portal vein thromboses [see *Warnings and Precautions (5.3)*].

267 **Pediatric Patients:** The data described below reflect median exposure to PROMACTA
268 of 91 days for 82 pediatric patients (aged 6 to 17 years) with chronic ITP, of whom 52% were
269 female, across the randomized phase of two placebo-controlled trials.

270 Table 6 presents the most common adverse drug reactions (experienced by greater than or
271 equal to 3% of pediatric patients 6 years and older receiving PROMACTA) across the two
272 placebo-controlled trials, with a higher incidence for PROMACTA versus placebo.
273

274 **Table 6. Adverse Reactions ($\geq 3\%$) with a Higher Incidence for PROMACTA versus**
 275 **Placebo from Two Placebo-controlled Trials in Pediatric Patients 6 Years and Older with**
 276 **Chronic Immune (Idiopathic) Thrombocytopenia**

Adverse Reaction	PROMACTA n = 82 (%)	Placebo n = 40 (%)
Upper respiratory tract infection	16	5
Nasopharyngitis	12	5
Rhinitis	11	8
Abdominal pain	9	5
Cough	9	0
Oropharyngeal pain	9	3
Toothache	6	0
AST increased	5	0
Diarrhea	5	3
Rash	5	3
ALT increased ^a	6	0
Vitamin D deficiency	4	0

277 ^a Includes adverse reactions or laboratory abnormalities $>3 \times$ ULN.

278

279 Chronic Hepatitis C-associated Thrombocytopenia: In the two placebo-controlled
 280 trials, 955 patients with chronic hepatitis C-associated thrombocytopenia received PROMACTA.
 281 Table 7 presents the most common adverse drug reactions (experienced by greater than or equal
 282 to 10% of patients receiving PROMACTA compared with placebo).

283

284 **Table 7. Adverse Reactions ($\geq 10\%$ and Greater than Placebo) from Two Placebo-**
285 **controlled Trials in Adults with Chronic Hepatitis C**

Adverse Reaction	PROMACTA + Peginterferon/Ribavirin n = 955 (%)	Placebo + Peginterferon/Ribavirin n = 484 (%)
Anemia	40	35
Pyrexia	30	24
Fatigue	28	23
Headache	21	20
Nausea	19	14
Diarrhea	19	11
Decreased appetite	18	14
Influenza-like illness	18	16
Asthenia	16	13
Insomnia	16	15
Cough	15	12
Pruritus	15	13
Chills	14	9
Myalgia	12	10
Alopecia	10	6
Peripheral edema	10	5

286
287 In the two controlled clinical trials in patients with chronic hepatitis C,
288 hyperbilirubinemia was reported in 8% of patients receiving PROMACTA compared with 3%
289 for placebo. Total bilirubin greater than or equal to 1.5 x ULN was reported in 76% and 50% of
290 patients receiving PROMACTA and placebo, respectively. ALT or AST greater than or equal to
291 3 x ULN was reported in 34% and 38% of patients for PROMACTA and placebo, respectively.

292 **Severe Aplastic Anemia:** In the single-arm, open-label trial, 43 patients with severe
293 aplastic anemia received PROMACTA. Eleven patients (26%) were treated for greater than
294 6 months and 7 patients (16%) were treated for greater than 1 year. The most common adverse
295 reactions (greater than or equal to 20%) were nausea, fatigue, cough, diarrhea, and headache.
296

297 **Table 8. Adverse Reactions (≥10%) from One Open-label Trial in Adults with Severe**
298 **Aplastic Anemia**

Adverse Reaction	PROMACTA (n = 43) (%)
Nausea	33
Fatigue	28
Cough	23
Diarrhea	21
Headache	21
Pain in extremity	19
Dyspnea	14
Pyrexia	14
Dizziness	14
Oropharyngeal pain	14
Febrile neutropenia	14
Abdominal pain	12
Ecchymosis	12
Muscle spasms	12
Transaminases increased	12
Arthralgia	12
Rhinorrhea	12

299
300 In this trial, patients had bone marrow aspirates evaluated for cytogenetic abnormalities.
301 Eight patients had a new cytogenetic abnormality reported on therapy, including 5 patients who
302 had complex changes in chromosome 7.

303
304 **6.2 Postmarketing Experience**

305 The following adverse reactions have been identified during post approval use of
306 PROMACTA. Because these reactions are reported voluntarily from a population of uncertain
307 size, it is not always possible to reliably estimate the frequency or establish a causal relationship
308 to drug exposure.

309 Vascular Disorders: Thrombotic microangiopathy with acute renal failure.

310 **7 DRUG INTERACTIONS**

311 *In vitro*, CYP1A2, CYP2C8, UGT1A1, and UGT1A3 are involved in the metabolism of
312 eltrombopag. *In vitro*, eltrombopag inhibits the following metabolic or transporter systems:
313 CYP2C8, CYP2C9, UGT1A1, UGT1A3, UGT1A4, UGT1A6, UGT1A9, UGT2B7, UGT2B15,
314 OATP1B1, and breast cancer resistance protein (BCRP) [see *Clinical Pharmacology (12.3)*].

315 **7.1 Polyvalent Cations (Chelation)**

316 Eltrombopag chelates polyvalent cations (such as iron, calcium, aluminum, magnesium,
317 selenium, and zinc) in foods, mineral supplements, and antacids. In a clinical trial, administration
318 of PROMACTA with a polyvalent cation-containing antacid decreased plasma eltrombopag
319 systemic exposure by approximately 70% [see *Clinical Pharmacology (12.3)*].

320 PROMACTA must not be taken within 4 hours of any medications or products
321 containing polyvalent cations such as antacids, dairy products, and mineral supplements to avoid
322 significant reduction in absorption of PROMACTA due to chelation [see *Dosage and*
323 *Administration (2.4)*].

324 **7.2 Transporters**

325 Coadministration of PROMACTA with the OATP1B1 and BCRP substrate, rosuvastatin,
326 to healthy adult subjects increased plasma rosuvastatin AUC_{0-∞} by 55% and C_{max} by 103% [see
327 *Clinical Pharmacology (12.3)*].

328 Use caution when concomitantly administering PROMACTA and drugs that are
329 substrates of OATP1B1 (e.g., atorvastatin, bosentan, ezetimibe, fluvastatin, glyburide,
330 olmesartan, pitavastatin, pravastatin, rosuvastatin, repaglinide, rifampin, simvastatin acid, SN-38
331 [active metabolite of irinotecan], valsartan) or BCRP (e.g., imatinib, irinotecan, lapatinib,
332 methotrexate, mitoxantrone, rosuvastatin, sulfasalazine, topotecan). Monitor patients closely for
333 signs and symptoms of excessive exposure to the drugs that are substrates of OATP1B1 or
334 BCRP and consider reduction of the dose of these drugs, if appropriate. In clinical trials with
335 PROMACTA, a dose reduction of rosuvastatin by 50% was recommended.

336 **7.3 Protease Inhibitors**

337 HIV Protease Inhibitors: In a drug interaction trial, coadministration of PROMACTA
338 with lopinavir/ritonavir (LPV/RTV) decreased plasma eltrombopag exposure by 17% [see
339 *Clinical Pharmacology (12.3)*]. No dose adjustment is recommended when PROMACTA is
340 coadministered with LPV/RTV. Drug interactions with other HIV protease inhibitors have not
341 been evaluated.

342 Hepatitis C Virus (HCV) Protease Inhibitors: Coadministration of PROMACTA with
343 either boceprevir or telaprevir did not affect eltrombopag or protease inhibitor exposure
344 significantly [see *Clinical Pharmacology (12.3)*]. No dose adjustments are recommended. Drug
345 interactions with other HCV protease inhibitors have not been evaluated.

346 **7.4 Peginterferon alfa-2a/b Therapy**

347 Coadministration of peginterferon alfa-2a (PEGASYS[®]) or 2b (PEGINTRON[®]) did not
348 affect eltrombopag exposure in two randomized, double-blind, placebo-controlled trials with
349 adult patients with chronic hepatitis C [see *Clinical Pharmacology (12.3)*].

350 **8 USE IN SPECIFIC POPULATIONS**

351 **8.1 Pregnancy**

352 Pregnancy Category C

353 There are no adequate and well-controlled studies of eltrombopag use in pregnancy. In
354 animal reproduction and developmental toxicity studies, there was evidence of embryoletality
355 and reduced fetal weights at maternally toxic doses. PROMACTA should be used in pregnancy
356 only if the potential benefit to the mother justifies the potential risk to the fetus.

357 In an early embryonic development study, female rats received oral eltrombopag at doses
358 of 10, 20, or 60 mg/kg/day (0.8, 2, and 6 times, respectively, the human clinical exposure based
359 on AUC in patients with ITP at 75 mg/day and 0.3, 1, and 3 times, respectively, the human
360 clinical exposure based on AUC in patients with chronic hepatitis C at 100 mg/day). Increased
361 pre- and post-implantation loss and reduced fetal weight were observed at the highest dose which
362 also caused maternal toxicity.

363 Eltrombopag was administered orally to pregnant rats at 10, 20, or 60 mg/kg/day (0.8, 2,
364 and 6 times, respectively, the human clinical exposure based on AUC in patients with ITP at
365 75 mg/day and 0.3, 1, and 3 times, respectively, the human clinical exposure based on AUC in
366 patients with chronic hepatitis C at 100 mg/day). Decreased fetal weights (6% to 7%) and a
367 slight increase in the presence of cervical ribs were observed at the highest dose which also
368 caused maternal toxicity. However, no evidence of major structural malformations was observed.

369 Pregnant rabbits were treated with oral eltrombopag doses of 30, 80, or 150 mg/kg/day
370 (0.04, 0.3, and 0.5 times, respectively, the human clinical exposure based on AUC in patients
371 with ITP at 75 mg/day and 0.02, 0.1, and 0.3 times, respectively, the human clinical exposure
372 based on AUC in patients with chronic hepatitis C at 100 mg/day). No evidence of fetotoxicity,
373 embryoletality, or teratogenicity was observed.

374 In a pre- and post-natal developmental toxicity study in pregnant rats (F0), no adverse
375 effects on maternal reproductive function or on the development of the offspring (F1) were
376 observed at doses up to 20 mg/kg/day (2 times the human clinical exposure based on AUC in
377 patients with ITP at 75 mg/day and similar to the human clinical exposure based on AUC in
378 patients with chronic hepatitis C at 100 mg/day). Eltrombopag was detected in the plasma of
379 offspring (F1). The plasma concentrations in pups increased with dose following administration
380 of drug to the F0 dams.

381 **8.3 Nursing Mothers**

382 It is not known whether eltrombopag is excreted in human milk. Because many drugs are
383 excreted in human milk and because of the potential for serious adverse reactions in nursing
384 infants from PROMACTA, a decision should be made whether to discontinue nursing or to
385 discontinue PROMACTA taking into account the importance of PROMACTA to the mother.

386 **8.4 Pediatric Use**

387 The safety and efficacy of PROMACTA in pediatric patients 6 years and older with
388 chronic ITP were evaluated in two double-blind, placebo-controlled trials [*see Adverse Reactions*
389 (6.2), *Clinical Studies (14.2)*]. The pharmacokinetics of eltrombopag have been evaluated in 130
390 pediatric patients 6 years and older with ITP dosed once daily [*see Clinical Pharmacology*
391 (12.3)]. See *Dosage and Administration (2.1)* for dosing recommendations for pediatric patients

392 6 years and older. The safety and efficacy of PROMACTA in pediatric patients younger than 6
393 years with ITP have not yet been established.

394 The safety and efficacy of PROMACTA in pediatric patients with thrombocytopenia
395 associated with chronic hepatitis C and severe aplastic anemia have not been established.

396 **8.5 Geriatric Use**

397 Of the 106 patients in two randomized clinical trials of PROMACTA 50 mg in chronic
398 ITP, 22% were 65 years of age and over, while 9% were 75 years of age and over. In the two
399 randomized clinical trials of PROMACTA in patients with chronic hepatitis C and
400 thrombocytopenia, 7% were 65 years of age and over, while fewer than 1% were 75 years of age
401 and over. No overall differences in safety or effectiveness were observed between these patients
402 and younger patients in the placebo-controlled trials, but greater sensitivity of some older
403 individuals cannot be ruled out.

404 **8.6 Hepatic Impairment**

405 Hepatic impairment influences the exposure of PROMACTA [*see Clinical*
406 *Pharmacology (12.3)*].

407 Reduce the initial dose of PROMACTA in patients with chronic ITP or severe aplastic
408 anemia who also have hepatic impairment (Child-Pugh Class A, B, C) [*see Dosage and*
409 *Administration (2.1, 2.3), Warnings and Precautions (5.2)*]. No dosage adjustment is necessary
410 for patients with chronic hepatitis C and hepatic impairment [*see Clinical Pharmacology (12.3)*].

411 **8.7 Renal Impairment**

412 No adjustment in the initial dose of PROMACTA is needed for patients with renal
413 impairment [*see Clinical Pharmacology (12.3)*]. Closely monitor patients with impaired renal
414 function when administering PROMACTA.

415 **8.8 Ethnicity**

416 Patients of East Asian ethnicity (i.e., Japanese, Chinese, Taiwanese, and Korean) exhibit
417 higher eltrombopag exposures. A reduction in the initial dose of PROMACTA is recommended
418 for patients of East Asian ancestry with ITP or severe aplastic anemia and patients of East Asian
419 ancestry with hepatic impairment (Child-Pugh Class A, B, C) [*see Dosage and Administration*
420 *(2.1, 2.3)*]. No dose reduction is needed in patients of East Asian ethnicity with chronic hepatitis
421 C [*see Clinical Pharmacology (12.3)*].

422 **10 OVERDOSAGE**

423 In the event of overdose, platelet counts may increase excessively and result in
424 thrombotic/thromboembolic complications.

425 In one report, a subject who ingested 5,000 mg of PROMACTA had a platelet count
426 increase to a maximum of $929 \times 10^9/L$ at 13 days following the ingestion. The patient also
427 experienced rash, bradycardia, ALT/AST elevations, and fatigue. The patient was treated with
428 gastric lavage, oral lactulose, intravenous fluids, omeprazole, atropine, furosemide, calcium,
429 dexamethasone, and plasmapheresis; however, the abnormal platelet count and liver test

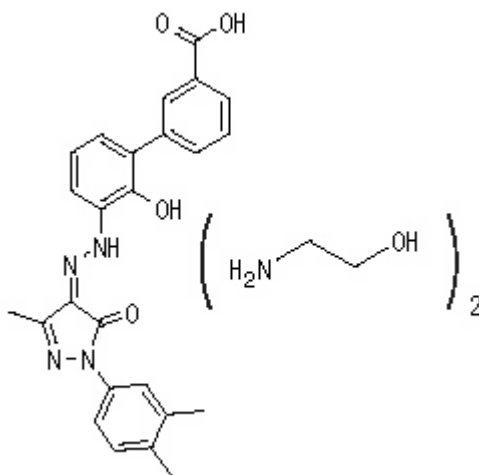
430 abnormalities persisted for 3 weeks. After 2 months' follow-up, all events had resolved without
431 sequelae.

432 In case of an overdose, consider oral administration of a metal cation-containing
433 preparation, such as calcium, aluminum, or magnesium preparations to chelate eltrombopag and
434 thus limit absorption. Closely monitor platelet counts. Reinitiate treatment with PROMACTA in
435 accordance with dosing and administration recommendations [see *Dosage and Administration*
436 (2.1, 2.2)].

437 11 DESCRIPTION

438 PROMACTA (eltrombopag) tablets contain eltrombopag olamine, a small molecule
439 thrombopoietin (TPO) receptor agonist for oral administration. Eltrombopag interacts with the
440 transmembrane domain of the TPO receptor (also known as cMpl) leading to increased platelet
441 production. Each tablet contains eltrombopag olamine in the amount equivalent to 12.5 mg,
442 25 mg, 50 mg, 75 mg, or 100 mg of eltrombopag free acid.

443 Eltrombopag olamine is a biphenyl hydrazone. The chemical name for eltrombopag
444 olamine is 3'-{(2Z)-2-[1-(3,4-dimethylphenyl)-3-methyl-5-oxo-1,5-dihydro-4H-pyrazol-4-
445 ylidene]hydrazino}-2'-hydroxy-3-biphenylcarboxylic acid - 2-aminoethanol (1:2). It has the
446 molecular formula $C_{25}H_{22}N_4O_4 \bullet 2(C_2H_7NO)$. The molecular weight is 564.65 for eltrombopag
447 olamine and 442.5 for eltrombopag free acid. Eltrombopag olamine has the following structural
448 formula:



449 Eltrombopag olamine is practically insoluble in aqueous buffer across a pH range of 1 to
450 7.4, and is sparingly soluble in water.

452 The inactive ingredients of PROMACTA tablets are: **Tablet Core:** magnesium stearate,
453 mannitol, microcrystalline cellulose, povidone, and sodium starch glycolate. **Coating:**
454 hypromellose (12.5-mg, 25-mg, 50-mg, and 75-mg tablets) or polyvinyl alcohol and talc (100-
455 mg tablet), polyethylene glycol 400, titanium dioxide, polysorbate 80 (12.5-mg tablet), FD&C
456 Yellow No. 6 aluminum lake (25-mg tablet), FD&C Blue No. 2 aluminum lake (50-mg tablet),
457 Iron Oxide Red and Iron Oxide Black (75-mg tablet), or Iron Oxide Yellow and Iron Oxide
458 Black (100-mg tablet).

459 **12 CLINICAL PHARMACOLOGY**

460 **12.1 Mechanism of Action**

461 Eltrombopag is an orally bioavailable, small-molecule TPO-receptor agonist that interacts
462 with the transmembrane domain of the human TPO-receptor and initiates signaling cascades that
463 induce proliferation and differentiation from bone marrow progenitor cells.

464 **12.3 Pharmacokinetics**

465 Absorption: Eltrombopag is absorbed with a peak concentration occurring 2 to 6 hours
466 after oral administration. Based on urinary excretion and biotransformation products eliminated
467 in feces, the oral absorption of drug-related material following administration of a single 75-mg
468 solution dose was estimated to be at least 52%.

469 An open-label, randomized, crossover trial was conducted to assess the effect of food on
470 the bioavailability of eltrombopag. A standard high-fat breakfast significantly decreased plasma
471 eltrombopag AUC_{0-∞} by approximately 59% and C_{max} by 65% and delayed T_{max} by 1 hour. The
472 calcium content of this meal may have also contributed to this decrease in exposure.

473 Distribution: The concentration of eltrombopag in blood cells is approximately 50% to
474 79% of plasma concentrations based on a radiolabel study. *In vitro* studies suggest that
475 eltrombopag is highly bound to human plasma proteins (greater than 99%). Eltrombopag is a
476 substrate of BCRP, but is not a substrate for P-glycoprotein (P-gp) or OATP1B1.

477 Metabolism: Absorbed eltrombopag is extensively metabolized, predominantly through
478 pathways including cleavage, oxidation, and conjugation with glucuronic acid, glutathione, or
479 cysteine. *In vitro* studies suggest that CYP1A2 and CYP2C8 are responsible for the oxidative
480 metabolism of eltrombopag. UGT1A1 and UGT1A3 are responsible for the glucuronidation of
481 eltrombopag.

482 Elimination: The predominant route of eltrombopag excretion is via feces (59%), and
483 31% of the dose is found in the urine. Unchanged eltrombopag in feces accounts for
484 approximately 20% of the dose; unchanged eltrombopag is not detectable in urine. The plasma
485 elimination half-life of eltrombopag is approximately 21 to 32 hours in healthy subjects and 26
486 to 35 hours in patients with ITP.

487 Drug Interactions: Polyvalent Cation-containing Antacids: In a clinical trial,
488 coadministration of 75 mg of PROMACTA with a polyvalent cation-containing antacid
489 (1,524 mg aluminum hydroxide, 1,425 mg magnesium carbonate, and sodium alginate) to 26
490 healthy adult subjects decreased plasma eltrombopag AUC_{0-∞} and C_{max} by approximately 70%.
491 The contribution of sodium alginate to this interaction is not known.

492 Cytochrome P450 Enzymes (CYPs): In a clinical trial, PROMACTA 75 mg once
493 daily was administered for 7 days to 24 healthy male subjects did not show inhibition or
494 induction of the metabolism of a combination of probe substrates for CYP1A2 (caffeine),
495 CYP2C19 (omeprazole), CYP2C9 (flurbiprofen), or CYP3A4 (midazolam) in humans. Probe
496 substrates for CYP2C8 were not evaluated in this trial.

497 *Rosuvastatin*: In a clinical trial, coadministration of 75 mg of PROMACTA once daily
498 for 5 days with a single 10-mg dose of the OATP1B1 and BCRP substrate, rosuvastatin to 39
499 healthy adult subjects increased plasma rosuvastatin $AUC_{0-\infty}$ by 55% and C_{max} by 103%.

500 *Protease Inhibitors: HIV Protease Inhibitors*: In a clinical trial, coadministration of
501 repeat-dose lopinavir 400 mg/ritonavir 100 mg twice daily with a single dose of PROMACTA
502 100 mg to 40 healthy adult subjects decreased plasma eltrombopag $AUC_{0-\infty}$ by 17%.

503 *HCV Protease Inhibitors*: In a clinical trial, coadministration of repeat-dose
504 telaprevir 750 mg every 8 hours or boceprevir 800 mg every 8 hours with a single dose of
505 PROMACTA 200 mg to healthy adult subjects did not alter plasma telaprevir, boceprevir, or
506 eltrombopag $AUC_{0-\infty}$ or C_{max} to a significant extent.

507 *Pegylated Interferon alfa-2a + Ribavirin and Pegylated Interferon alfa-2b +*
508 *Ribavirin*: The pharmacokinetics of eltrombopag in both the presence and absence of pegylated
509 interferon alfa-2a and 2b therapy were evaluated using a population pharmacokinetic analysis in
510 635 patients with chronic hepatitis C. The population PK model estimates of clearance indicate
511 no significant difference in eltrombopag clearance in the presence of pegylated interferon alfa
512 plus ribavirin therapy.

513 *In vitro Studies*: Eltrombopag is an inhibitor of CYP2C8 and CYP2C9 *in vitro*.
514 Eltrombopag is an inhibitor of UGT1A1, UGT1A3, UGT1A4, UGT1A6, UGT1A9, UGT2B7,
515 and UGT2B15 *in vitro*. Eltrombopag is an inhibitor of the organic anion transporting polypeptide
516 OATP1B1 and BCRP *in vitro*.

517 Specific Populations: Ethnicity: Based on two population PK analyses of eltrombopag
518 concentrations in patients with ITP or chronic hepatitis C, East Asian (i.e., Japanese, Chinese,
519 Taiwanese, Korean) subjects exhibited 50% to 55% higher eltrombopag plasma concentrations
520 compared with non-East Asian subjects [*see Dosage and Administration (2.1, 2.3)*].

521 An approximately 40% higher systemic eltrombopag exposure in healthy African-
522 American subjects was noted in at least one clinical pharmacology trial. The effect of African-
523 American ethnicity on exposure and related safety and efficacy of eltrombopag has not been
524 established.

525 *Hepatic Impairment*: In a pharmacokinetic trial, the disposition of a single 50-mg dose
526 of PROMACTA in patients with mild, moderate, and severe hepatic impairment was compared
527 with subjects with normal hepatic function. The degree of hepatic impairment was based on
528 Child-Pugh score. Plasma eltrombopag $AUC_{0-\infty}$ was 41% higher in patients with mild hepatic
529 impairment (Child-Pugh Class A) compared with subjects with normal hepatic function. Plasma
530 eltrombopag $AUC_{0-\infty}$ was approximately 2-fold higher in patients with moderate (Child-Pugh
531 Class B) and severe hepatic impairment (Child-Pugh Class C). The half-life of eltrombopag was
532 prolonged 2-fold in these patients. This clinical trial did not evaluate protein-binding effects.

533 *Chronic Liver Disease*: A population PK analysis in thrombocytopenic patients with
534 chronic liver disease following repeat doses of eltrombopag demonstrated that mild hepatic
535 impairment resulted in an 87% to 110% higher plasma eltrombopag $AUC_{(0-\tau)}$ and patients with
536 moderate hepatic impairment had approximately 141% to 240% higher plasma eltrombopag

537 AUC_(0-τ) values compared with patients with normal hepatic function. The half-life of
538 eltrombopag was prolonged 3-fold in patients with mild hepatic impairment and 4-fold in
539 patients with moderate hepatic impairment. This clinical trial did not evaluate protein-binding
540 effects.

541 *Chronic Hepatitis C:* A population PK analysis in 28 healthy adults and 635 patients
542 with chronic hepatitis C demonstrated that patients with chronic hepatitis C treated with
543 PROMACTA had higher plasma AUC_(0-τ) values as compared with healthy subjects, and AUC_(0-τ)
544 increased with increasing Child-Pugh score. Patients with chronic hepatitis C and mild hepatic
545 impairment had approximately 100% to 144% higher plasma AUC_(0-τ) compared with healthy
546 subjects. This clinical trial did not evaluate protein-binding effects.

547 *Renal Impairment:* The disposition of a single 50-mg dose of PROMACTA in patients
548 with mild (creatinine clearance [CrCl] of 50 to 80 mL/min), moderate (CrCl of 30 to
549 49 mL/min), and severe (CrCl less than 30 mL/min) renal impairment was compared with
550 subjects with normal renal function. Average total plasma eltrombopag AUC_{0-∞} was 32% to 36%
551 lower in subjects with mild to moderate renal impairment and 60% lower in subjects with severe
552 renal impairment compared with healthy subjects. The effect of renal impairment on unbound
553 (active) eltrombopag exposure has not been assessed.

554 *Pediatric Patients:* The pharmacokinetics of eltrombopag have been evaluated in 130
555 pediatric patients 6 years and older with ITP dosed once daily in two trials. Plasma eltrombopag
556 apparent clearance following oral administration (CL/F) increased with increasing body weight.
557 East Asian pediatric patients with ITP had approximately 43% higher plasma eltrombopag
558 AUC_(0-τ) values as compared with non-East Asian patients.

559 Plasma eltrombopag AUC_(0-τ) and C_{max} in pediatric patients aged 12 to 17 years was
560 similar to that observed in adults. The pharmacokinetic parameters of eltrombopag in pediatric
561 patients with ITP are shown in Table 9.

562

563 **Table 9. Geometric Mean (95% CI) Steady-state Plasma Eltrombopag Pharmacokinetic**
564 **Parameters^a in Patients with ITP (Normalized to a 50-mg Dose Once-daily)**

Age	C _{max} ^b (mcg/mL)	AUC _(0-τ) ^b (mcg.h/mL)
Adults (n = 108)	7.03 (6.44, 7.68)	101 (91.4, 113)
12 to 17 years (n = 62)	6.80 (6.17, 7.50)	103 (91.1, 116)
6 to 11 years (n = 68)	10.3 (9.42, 11.2)	153 (137, 170)

565 ^a PK parameters presented as geometric mean (95% CI).

566 ^b Based on population PK post-hoc estimates.

567

568 **12.6 Assessment of Risk of QT/QTc Prolongation**

569 There is no indication of a QT/QTc prolonging effect of PROMACTA at doses up to
570 150 mg daily for 5 days. The effects of PROMACTA at doses up to 150 mg daily for 5 days
571 (supratherapeutic doses) on the QT/QTc interval were evaluated in a double-blind, randomized,
572 placebo- and positive-controlled (moxifloxacin 400 mg, single oral dose) crossover trial in
573 healthy adult subjects. Assay sensitivity was confirmed by significant QTc prolongation by
574 moxifloxacin.

575 **13 NONCLINICAL TOXICOLOGY**

576 **13.1 Carcinogenesis, Mutagenesis, Impairment of Fertility**

577 Eltrombopag does not stimulate platelet production in rats, mice, or dogs because of
578 unique TPO receptor specificity. Data from these animals do not fully model effects in humans.

579 Eltrombopag was not carcinogenic in mice at doses up to 75 mg/kg/day or in rats at doses
580 up to 40 mg/kg/day (exposures up to 4 times the human clinical exposure based on AUC in
581 patients with ITP at 75 mg/day and 2 times the human clinical exposure based on AUC in
582 patients with chronic hepatitis C at 100 mg/day).

583 Eltrombopag was not mutagenic or clastogenic in a bacterial mutation assay or in two *in*
584 *vivo* assays in rats (micronucleus and unscheduled DNA synthesis, 10 times the human clinical
585 exposure based on C_{max} in patients with ITP at 75 mg/day and 7 times the human clinical
586 exposure based on C_{max} in patients with chronic hepatitis C at 100 mg/day). In the *in vitro* mouse
587 lymphoma assay, eltrombopag was marginally positive (less than 3-fold increase in mutation
588 frequency).

589 Eltrombopag did not affect female fertility in rats at doses up to 20 mg/kg/day (2 times
590 the human clinical exposure based on AUC in patients with ITP at 75 mg/day and similar to the
591 human clinical exposure based on AUC in patients with chronic hepatitis C at 100 mg/day).
592 Eltrombopag did not affect male fertility in rats at doses up to 40 mg/kg/day, the highest dose
593 tested (3 times the human clinical exposure based on AUC in patients with ITP at 75 mg/day and
594 2 times the human clinical exposure based on AUC in patients with chronic hepatitis C at
595 100 mg/day).

596 **13.2 Animal Pharmacology and/or Toxicology**

597 Eltrombopag is phototoxic *in vitro*. There was no evidence of *in vivo* cutaneous or ocular
598 phototoxicity in rodents.

599 Treatment-related cataracts were detected in rodents in a dose- and time-dependent
600 manner. At greater than or equal to 6 times the human clinical exposure based on AUC in
601 patients with ITP at 75 mg/day and 3 times the human clinical exposure based on AUC in
602 patients with chronic hepatitis C at 100 mg/day, cataracts were observed in mice after 6 weeks
603 and in rats after 28 weeks of dosing. At greater than or equal to 4 times the human clinical
604 exposure based on AUC in patients with ITP at 75 mg/day and 2 times the human clinical
605 exposure based on AUC in patients with chronic hepatitis C at 100 mg/day, cataracts were

606 observed in mice after 13 weeks and in rats after 39 weeks of dosing [see *Warnings and*
607 *Precautions (5.4)*].

608 Renal tubular toxicity was observed in studies up to 14 days in duration in mice and rats
609 at exposures that were generally associated with morbidity and mortality. Tubular toxicity was
610 also observed in a 2-year oral carcinogenicity study in mice at doses of 25, 75, and
611 150 mg/kg/day. The exposure at the lowest dose was 1.2 times the human clinical exposure
612 based on AUC in patients with ITP at 75 mg/day and 0.6 times the human clinical exposure
613 based on AUC in patients with chronic hepatitis C at 100 mg/day. No similar effects were
614 observed in mice after 13 weeks at exposures greater than those associated with renal changes in
615 the 2-year study, suggesting that this effect is both dose- and time-dependent.

616 **14 CLINICAL STUDIES**

617 **14.1 Chronic ITP**

618 Adults: The efficacy and safety of PROMACTA in adult patients with chronic ITP were
619 evaluated in three randomized, double-blind, placebo-controlled trials and in an open-label
620 extension trial.

621 *Trials 1 and 2:* In trials 1 and 2, patients who had completed at least one prior ITP
622 therapy and who had a platelet count less than $30 \times 10^9/L$ were randomized to receive either
623 PROMACTA or placebo daily for up to 6 weeks, followed by 6 weeks off therapy. During the
624 trials, PROMACTA or placebo was discontinued if the platelet count exceeded $200 \times 10^9/L$.

625 The median age of the patients was 50 years and 60% were female. Approximately 70%
626 of the patients had received at least 2 prior ITP therapies (predominantly corticosteroids,
627 immunoglobulins, rituximab, cytotoxic therapies, danazol, and azathioprine) and 40% of the
628 patients had undergone splenectomy. The median baseline platelet counts (approximately
629 $18 \times 10^9/L$) were similar among all treatment groups.

630 Trial 1 randomized 114 patients (2:1) to PROMACTA 50 mg or placebo. Trial 2
631 randomized 117 patients (1:1:1:1) among placebo or 1 of 3 dose regimens of PROMACTA,
632 30 mg, 50 mg, or 75 mg each administered daily.

633 The efficacy of PROMACTA in this trial was evaluated by response rate, defined as a
634 shift from a baseline platelet count of less than $30 \times 10^9/L$ to greater than or equal to $50 \times 10^9/L$
635 at any time during the treatment period (Table 10).

636

637 **Table 10. Trials 1 and 2 Platelet Count Response ($\geq 50 \times 10^9/L$) Rates in Adults with**
638 **Chronic Immune (Idiopathic) Thrombocytopenia**

Trial	PROMACTA 50 mg Daily	Placebo
1	43/73 (59%) ^a	6/37 (16%)
2	19/27 (70%) ^a	3/27 (11%)

639 ^a *P* value <0.001 for PROMACTA versus placebo.

640

641 The platelet count response to PROMACTA was similar among patients who had or had
642 not undergone splenectomy. In general, increases in platelet counts were detected 1 week
643 following initiation of PROMACTA and the maximum response was observed after 2 weeks of
644 therapy. In the placebo and 50-mg–dose groups of PROMACTA, the trial drug was discontinued
645 due to an increase in platelet counts to greater than $200 \times 10^9/L$ in 3% and 27% of the patients,
646 respectively. The median duration of treatment with the 50-mg dose of PROMACTA was
647 42 days in Trial 1 and 43 days in Trial 2.

648 Of 7 patients who underwent hemostatic challenges, additional ITP medications were
649 required in 3 of 3 placebo group patients and 0 of 4 patients treated with PROMACTA. Surgical
650 procedures accounted for most of the hemostatic challenges. Hemorrhage requiring transfusion
651 occurred in one placebo group patient and no patients treated with PROMACTA.

652 *Trial 3:* In this trial, 197 patients were randomized (2:1) to receive either PROMACTA
653 50 mg once daily ($n = 135$) or placebo ($n = 62$) for 6 months, during which time the dose of
654 PROMACTA could be adjusted based on individual platelet counts. Patients were allowed to
655 taper or discontinue concomitant ITP medications after being treated with PROMACTA for
656 6 weeks. Patients were permitted to receive rescue treatments at any time during the trial as
657 clinically indicated.

658 The median age of the patients treated with PROMACTA and placebo was 47 years and
659 52.5 years, respectively. Approximately half of the patients treated with PROMACTA and
660 placebo (47% and 50%, respectively) were receiving concomitant ITP medication
661 (predominantly corticosteroids) at randomization and had baseline platelet counts less than or
662 equal to $15 \times 10^9/L$ (50% and 48%, respectively). A similar percentage of patients treated with
663 PROMACTA and placebo (37% and 34%, respectively) had a prior splenectomy.

664 The efficacy of PROMACTA in this trial was evaluated by the odds of achieving a
665 platelet count greater than or equal to $50 \times 10^9/L$ and less than or equal to $400 \times 10^9/L$ for
666 patients receiving PROMACTA relative to placebo and was based on patient response profiles
667 throughout the 6-month treatment period. In 134 patients who completed 26 weeks of treatment,
668 a sustained platelet response (platelet count greater than or equal to $50 \times 10^9/L$ and less than or
669 equal to $400 \times 10^9/L$ for 6 out of the last 8 weeks of the 26-week treatment period in the absence
670 of rescue medication at any time) was achieved by 60% of patients treated with PROMACTA,
671 compared with 10% of patients treated with placebo (splenectomized patients: PROMACTA
672 51%, placebo 8%; non-splenectomized patients: PROMACTA 66%, placebo 11%). The
673 proportion of responders in the group of patients treated with PROMACTA was between 37%
674 and 56% compared with 7% and 19% in the placebo treatment group for all on-therapy visits.
675 Patients treated with PROMACTA were significantly more likely to achieve a platelet count
676 between $50 \times 10^9/L$ and $400 \times 10^9/L$ during the entire 6-month treatment period compared with
677 those patients treated with placebo.

678 Outcomes of treatment are presented in Table 11 for all patients enrolled in the trial.
679

680 **Table 11. Outcomes of Treatment from Trial 3 in Adults with Chronic Immune**
681 **(Idiopathic) Thrombocytopenia**

Outcome	PROMACTA N = 135	Placebo N = 62
Mean number of weeks with platelet counts $\geq 50 \times 10^9/L$	11.3	2.4
Requiring rescue therapy, n (%)	24 (18)	25 (40)

682
683 Among 94 patients receiving other ITP therapy at baseline, 37 (59%) of 63 patients
684 treated with PROMACTA and 10 (32%) of 31 patients in the placebo group discontinued
685 concomitant therapy at some time during the trial.

686 *Extension Trial:* Patients who completed any prior clinical trial with PROMACTA were
687 enrolled in an open-label, single-arm trial in which attempts were made to decrease the dose or
688 eliminate the need for any concomitant ITP medications. PROMACTA was administered to
689 299 patients; 249 completed 6 months, 210 patients completed 12 months, and 138 patients
690 completed 24 months of therapy. The median baseline platelet count was $19 \times 10^9/L$ prior to
691 administration of PROMACTA.

692 Pediatric Patients: The efficacy and safety of PROMACTA in pediatric patients 6 years
693 and older with chronic ITP were evaluated in two double-blind, placebo-controlled trials. The
694 trials differed in time since ITP diagnosis: at least 6 months versus at least 12 months. During the
695 trials, doses could be increased every 2 weeks to a maximum of 75 mg once daily. The dose of
696 PROMACTA was reduced if the platelet count exceeded $200 \times 10^9/L$ and interrupted and
697 reduced if it exceeded $400 \times 10^9/L$.

698 *Trial 4:* Patients refractory or relapsed to at least one prior ITP therapy with a platelet
699 count less than $30 \times 10^9/L$ (n = 72) were stratified by age and randomized (2:1) to PROMACTA
700 (n = 49) or placebo (n = 23). The starting dose for patients aged 6 to 17 years was 50 mg once
701 daily for those at least 27 kg and 37.5 mg once daily for those less than 27 kg, administered as
702 oral tablets. A reduced dose of 25 mg once daily was used for East Asian patients aged 6 to
703 17 years regardless of weight.

704 The 13-week, randomized, double-blind period was followed by a 24-week, open-label
705 period where patients from both arms were eligible to receive PROMACTA.

706 The median age of the patients was 11 years and 44% were female. Approximately 63%
707 of patients had a baseline platelet count less than or equal to $15 \times 10^9/L$, a characteristic that was
708 similar between treatment arms. The percentage of patients with at least 2 prior ITP therapies
709 (predominantly corticosteroids and immunoglobulins) was 73% in the group treated with
710 PROMACTA and 91% in the group treated with placebo. Three patients in the group treated
711 with PROMACTA had undergone splenectomy.

712 The efficacy of PROMACTA in this trial was evaluated by the proportion of subjects on
713 PROMACTA achieving platelet counts $\geq 50 \times 10^9/L$ (in the absence of rescue therapy) for at least
714 6 out of 8 weeks between Weeks 5 to 12 of the randomized, double-blind period (Table 12).
715

716 **Table 12. Trial 4 Platelet Response ($\geq 50 \times 10^9/L$ without Rescue) for 6 out of 8 Weeks**
717 **(between Weeks 5 to 12) Overall and by Age Cohort in Pediatric Patients 6 Years and**
718 **Older with Chronic Immune (Idiopathic) Thrombocytopenia**

Age Cohort	PROMACTA	Placebo
Overall	21/49 (43%) ^a	1/23 (4%)
12 to 17 years	10/24 (42%)	1/10 (10%)
6 to 11 years	11/25 (44%)	0/13 (0%)

719 ^a P value = 0.0011 for PROMACTA versus placebo.

720

721 More pediatric patients treated with PROMACTA (76%) compared with placebo (26%)
722 had at least one platelet count greater than or equal to $50 \times 10^9/L$ during the first 12 weeks of
723 randomized treatment in absence of rescue therapy. Fewer pediatric patients treated with
724 PROMACTA required rescue treatment during the randomized, double-blind period compared
725 with placebo-treated patients (18% [9/49] versus 22% [5/23]). In the patients who achieved a
726 platelet response ($\geq 50 \times 10^9/L$ without rescue) for 6 out of 8 weeks (between weeks 5 to 12),
727 71% (15/21) had an initial response in the first 2 weeks after starting PROMACTA.

728 Patients were permitted to reduce or discontinue baseline ITP therapy only during the
729 open-label phase of the trial. Among 10 patients receiving other ITP therapy at baseline, 50%
730 (5/10) reduced (n = 1) or discontinued (n = 4) concomitant therapy, mainly corticosteroids,
731 without needing rescue therapy.

732 *Trial 5:* Patients refractory or relapsed to at least one prior ITP therapy with a platelet
733 count less than $30 \times 10^9/L$ (n = 52) were stratified by age and randomized (2:1) to PROMACTA
734 (n = 35) or placebo (n = 17). The starting dose for patients aged 12 to 17 years was 37.5 mg once
735 daily regardless of weight or race. The starting dose for patients aged 6 to 11 years was 50 mg
736 once daily for those greater than or equal to 27 kg and 25 mg once daily for those less than
737 27 kg, administered as oral tablets. Reduced doses of 25 mg (for those greater than or equal to
738 27 kg) and 12.5 mg (for those less than 27 kg), each once daily, were used for East Asian
739 patients in this age range.

740 The 7-week, randomized, double-blind period was followed by an open-label period of
741 up to 24 weeks where patients from both arms were eligible to receive PROMACTA.

742 The median age of the patients was 11 years and 63% were female. Approximately 54%
743 of patients had a baseline platelet count less than or equal to $15 \times 10^9/L$. The percentage of
744 patients with at least 2 prior ITP therapies (predominantly corticosteroids and immunoglobulins)
745 was 89% in the group treated with PROMACTA and 82% in the group treated with placebo.
746 Five patients in the group treated with PROMACTA had undergone splenectomy.

747 The efficacy of PROMACTA in this trial was evaluated by the proportion of patients
748 achieving platelet counts greater than or equal to $50 \times 10^9/L$ (in absence of rescue therapy) at
749 least once between Weeks 1 and 6 of the randomized, double-blind period (Table 13). Platelet
750 response to PROMACTA was consistent across the age cohorts.

751

752 **Table 13. Trial 5 Platelet Count Response ($\geq 50 \times 10^9/L$ without Rescue) Rates in Pediatric**
753 **Patients 6 Years and Older with Chronic Immune (Idiopathic) Thrombocytopenia**

	PROMACTA	Placebo
Overall	22/35 (63%) ^a	3/17 (18%)
12 to 17 years	10/16 (62%)	0/8 (0%)
6 to 11 years	12/19 (63%)	3/9 (33%)

754 ^a *P* value = 0.0043 for PROMACTA versus placebo.
755

756 Fewer pediatric patients treated with PROMACTA required rescue treatment during the
757 randomized, double-blind period compared with placebo-treated patients (14% [5/35] versus
758 59% [10/17]).

759 Patients were permitted to reduce or discontinue baseline ITP therapy only during the
760 open-label phase of the trial. Among 11 patients receiving other ITP therapy at baseline, 36%
761 (4/11) reduced (n = 2) or discontinued (n = 2) concomitant therapy, mainly corticosteroids,
762 without needing rescue therapy.

763 **14.2 Chronic Hepatitis C-associated Thrombocytopenia**

764 The efficacy and safety of PROMACTA for the treatment of thrombocytopenia in adult
765 patients with chronic hepatitis C were evaluated in two randomized, double-blind, placebo-
766 controlled trials. Trial 1 utilized peginterferon alfa-2a (PEGASYS[®]) plus ribavirin for antiviral
767 treatment and Trial 2 utilized peginterferon alfa-2b (PEGINTRON[®]) plus ribavirin. In both trials,
768 patients with a platelet count of less than $75 \times 10^9/L$ were enrolled and stratified by platelet
769 count, screening HCV RNA, and HCV genotype. Patients were excluded if they had evidence of
770 decompensated liver disease with Child-Pugh score greater than 6 (class B and C), history of
771 ascites, or hepatic encephalopathy. The median age of the patients in both trials was 52 years,
772 63% were male, and 74% were Caucasian. Sixty-nine percent of patients had HCV genotypes 1,
773 4, 6, with the remainder genotypes 2 and 3. Approximately 30% of patients had been previously
774 treated with interferon and ribavirin. The majority of patients (90%) had bridging fibrosis and
775 cirrhosis, as indicated by noninvasive testing. A similar proportion (95%) of patients in both
776 treatment groups had Child-Pugh level A (score 5 to 6) at baseline. A similar proportion of
777 patients (2%) in both treatment groups had baseline international normalized ratio (INR) greater
778 than 1.7. Median baseline platelet counts (approximately $60 \times 10^9/L$) were similar in both
779 treatment groups. The trials consisted of 2 phases – a pre-antiviral treatment phase and an
780 antiviral treatment phase. In the pre-antiviral treatment phase, patients received open-label
781 PROMACTA to increase the platelet count to a threshold of greater than or equal to $90 \times 10^9/L$
782 for Trial 1 and greater than or equal to $100 \times 10^9/L$ for Trial 2. PROMACTA was administered at
783 an initial dose of 25 mg once daily for 2 weeks and increased in 25-mg increments over 2- to 3-
784 week periods to achieve the optimal platelet count to initiate antiviral therapy. The maximal time
785 patients could receive open-label PROMACTA was 9 weeks. If threshold platelet counts were
786 achieved, patients were randomized (2:1) to the same dose of PROMACTA at the end of the pre-

787 treatment phase or to placebo. PROMACTA was administered in combination with pegylated
788 interferon and ribavirin per their respective prescribing information for up to 48 weeks.

789 The efficacy of PROMACTA for both trials was evaluated by sustained virologic
790 response (SVR) defined as the percentage of patients with undetectable HCV-RNA at 24 weeks
791 after completion of antiviral treatment. The median time to achieve the target platelet count
792 greater than or equal to $90 \times 10^9/L$ was approximately 2 weeks. Ninety-five percent of patients
793 were able to initiate antiviral therapy.

794 In both trials, a significantly greater proportion of patients treated with PROMACTA
795 achieved SVR (see Table 14). The improvement in the proportion of patients who achieved SVR
796 was consistent across subgroups based on baseline platelet count (less than $50 \times 10^9/L$ versus
797 greater than or equal to $50 \times 10^9/L$). In patients with high baseline viral loads (greater than or
798 equal to 800,000), the SVR rate was 18% (82/452) for PROMACTA versus 8% (20/239) for
799 placebo.
800

801 **Table 14. Trials 1 and 2 Sustained Virologic Response in Adults with Chronic Hepatitis C**

Pre-antiviral Treatment Phase	Trial 1 ^a		Trial 2 ^b	
	N = 715		N = 805	
% Patients who achieved target platelet counts and initiated antiviral therapy ^c	95%		94%	
Antiviral Treatment Phase	PROMACTA N = 450 %	Placebo N = 232 %	PROMACTA N = 506 %	Placebo N = 253 %
Overall SVR^d	23	14	19	13
HCV Genotype 2,3	35	24	34	25
HCV Genotype 1,4,6	18	10	13	7

802 ^a PROMACTA given in combination with peginterferon alfa-2a (180 mcg once weekly for
803 48 weeks for genotypes 1/4/6; 24 weeks for genotype 2 or 3) plus ribavirin (800 to 1,200 mg
804 daily in 2 divided doses orally).

805 ^b PROMACTA given in combination with peginterferon alfa-2b (1.5 mcg/kg once weekly for
806 48 weeks for genotypes 1/4/6; 24 weeks for genotype 2 or 3) plus ribavirin (800 to 1,400 mg
807 daily in 2 divided doses orally).

808 ^c Target platelet count was $\geq 90 \times 10^9/L$ for Trial 1 and $\geq 100 \times 10^9/L$ for Trial 2.

809 ^d *P* value <0.05 for PROMACTA versus placebo.
810

811 The majority of patients treated with PROMACTA (76%) maintained a platelet count
812 greater than or equal to $50 \times 10^9/L$ compared with 19% for placebo. A greater proportion of
813 patients on PROMACTA did not require any antiviral dose reduction as compared with placebo
814 (45% versus 27%).

815 **14.3 Severe Aplastic Anemia**

816 PROMACTA was studied in a single-arm, single-center, open-label trial in 43 patients
817 with severe aplastic anemia who had an insufficient response to at least one prior
818 immunosuppressive therapy and who had a platelet count less than or equal to $30 \times 10^9/L$.
819 PROMACTA was administered at an initial dose of 50 mg once daily for 2 weeks and increased
820 over 2-week periods up to a maximum dose of 150 mg once daily. The efficacy of PROMACTA
821 in the study was evaluated by the hematologic response assessed after 12 weeks of treatment.
822 Hematologic response was defined as meeting 1 or more of the following criteria: 1) platelet
823 count increases to $20 \times 10^9/L$ above baseline, or stable platelet counts with transfusion
824 independence for a minimum of 8 weeks; 2) hemoglobin increase by greater than 1.5 g/dL, or a
825 reduction in greater than or equal to 4 units of RBC transfusions for 8 consecutive weeks; 3)
826 ANC increase of 100% or an ANC increase greater than $0.5 \times 10^9/L$. PROMACTA was
827 discontinued after 16 weeks if no hematologic response was observed. Patients who responded
828 continued therapy in an extension phase of the trial.

829 The treated population had median age of 45 years (range: 17 to 77 years) and 56% were
830 male. At baseline, the median platelet count was $20 \times 10^9/L$, hemoglobin was 8.4 g/dL, ANC was
831 $0.58 \times 10^9/L$, and absolute reticulocyte count was $24.3 \times 10^9/L$. Eighty-six percent of patients
832 were RBC transfusion dependent and 91% were platelet transfusion dependent. The majority of
833 patients (84%) received at least 2 prior immunosuppressive therapies. Three patients had
834 cytogenetic abnormalities at baseline.

835 Table 15 presents the efficacy results.

836
837 **Table 15. Hematologic Response in Patients with Severe Aplastic Anemia**

Outcome	PROMACTA N = 43
Response rate ^a , n (%)	17 (40)
95% CI (%)	(25, 56)
Median of duration of response in months (95%CI)	NR ^b (3.0, NR ^b)

838 ^a Includes single- and multi-lineage.

839 ^b NR = Not reached due to few events (relapsed).

840
841 In the 17 responders, the platelet transfusion-free period ranged from 8 to 1,096 days with
842 a median of 200 days, and the RBC transfusion-free period ranged from 15 to 1,082 days with a
843 median of 208 days.

844 In the extension phase, 8 patients achieved a multi-lineage response; 4 of these patients
845 subsequently tapered off treatment with PROMACTA and maintained the response (median
846 follow up: 8.1 months, range: 7.2 to 10.6 months).

847 **16 HOW SUPPLIED/STORAGE AND HANDLING**

- 848 • The 12.5-mg tablets are round, biconvex, white, film-coated tablets debossed with GS MZ1
849 and 12.5 on one side and are available in bottles of 30: NDC 0007-4643-13.
- 850 • The 25-mg tablets are round, biconvex, orange, film-coated tablets debossed with GS NX3
851 and 25 on one side and are available in bottles of 30: NDC 0007-4640-13.
- 852 • The 50-mg tablets are round, biconvex, blue, film-coated tablets debossed with GS UFU and
853 50 on one side and are available in bottles of 30: NDC 0007-4641-13.
- 854 • The 75-mg tablets are round, biconvex, pink, film-coated tablets debossed with GS FFS and
855 75 on one side and are available in bottles of 30: NDC 0007-4642-13.
- 856 • The 100-mg tablets are round, biconvex, green, film-coated tablets debossed with GS 1L5
857 and are available in bottles of 30: NDC 0007-4646-13. This product contains a desiccant.

858 Store at room temperature between 20°C and 25°C (68°F to 77°F); excursions permitted
859 to 15°C to 30°C (59°F to 86°F) [see USP Controlled Room Temperature]. Do not remove
860 desiccant if present. Dispense in original bottle.

861 **17 PATIENT COUNSELING INFORMATION**

862 Advise the patient or caregiver to read the FDA-approved patient labeling (Medication
863 Guide).

864 Prior to treatment, patients should fully understand and be informed of the following risks
865 and considerations for PROMACTA:

- 866 • For patients with chronic ITP, therapy with PROMACTA is administered to achieve and
867 maintain a platelet count greater than or equal to $50 \times 10^9/L$ as necessary to reduce the risk
868 for bleeding.
- 869 • For patients with chronic hepatitis C, therapy with PROMACTA is administered to achieve
870 and maintain a platelet count necessary to initiate and maintain antiviral therapy with
871 pegylated interferon and ribavirin.
- 872 • Therapy with PROMACTA may be associated with hepatobiliary laboratory abnormalities.
- 873 • Advise patients with chronic hepatitis C and cirrhosis that they may be at risk for hepatic
874 decompensation when receiving alfa interferon therapy.
- 875 • Advise patients that they should report any of the following signs and symptoms of liver
876 problems to their healthcare provider right away.
- 877 • yellowing of the skin or the whites of the eyes (jaundice)
 - 878 • unusual darkening of the urine
 - 879 • unusual tiredness
 - 880 • right upper stomach area pain
 - 881 • confusion
 - 882 • swelling of the stomach area (abdomen)
- 883 • Advise patients that thrombocytopenia and risk of bleeding may reoccur upon discontinuing
884 PROMACTA, particularly if PROMACTA is discontinued while the patient is on
885 anticoagulants or antiplatelet agents.

- 886 • Advise patients that too much PROMACTA may result in excessive platelet counts and a risk
887 for thrombotic/thromboembolic complications.
- 888 • Advise patients that during therapy with PROMACTA, they should continue to avoid
889 situations or medications that may increase the risk for bleeding.
- 890 • Advise patients to have a baseline ocular examination prior to administration of
891 PROMACTA and be monitored for signs and symptoms of cataracts during therapy.
- 892 • Advise patients to keep at least a 4-hour interval between PROMACTA and foods, mineral
893 supplements, and antacids which contain polyvalent cations such as iron, calcium, aluminum,
894 magnesium, selenium, and zinc.

895

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897 registered trademarks of their respective owners: PEGASYS/Hoffmann-La Roche Inc.;
898 PEGINTRON/Schering Corporation.

899



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901 GlaxoSmithKline

902 Research Triangle Park, NC 27709

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906 PRM:XPI

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MEDICATION GUIDE

PROMACTA[®] (pro-MAC-ta) (eltrombopag) tablets

Read this Medication Guide before you start taking PROMACTA and each time you get a refill. There may be new information. This Medication Guide does not take the place of talking with your healthcare provider about your medical condition or treatment.

What is the most important information I should know about PROMACTA?

PROMACTA can cause serious side effects, including:

Liver problems. If you have chronic hepatitis C virus, and take PROMACTA with interferon and ribavirin treatment, PROMACTA may increase your risk of liver problems. Tell your healthcare provider right away if you have any of these signs and symptoms of liver problems:

- yellowing of the skin or the whites of the eyes (jaundice)
- unusual darkening of the urine
- unusual tiredness
- right upper stomach area (abdomen) pain
- confusion
- swelling of the stomach area (abdomen)

See “What are the possible side effects of PROMACTA?” for other side effects of PROMACTA.

What is PROMACTA?

PROMACTA is a prescription medicine used to treat adults and children 6 years of age and older with low blood platelet counts due to chronic immune (idiopathic) thrombocytopenia (ITP), when other medicines to treat ITP or surgery to remove the spleen have not worked well enough.

PROMACTA is also used to treat patients with:

- low blood platelet counts due to chronic hepatitis C virus (HCV) infection before and during treatment with interferon
- severe aplastic anemia (SAA) when other medicines to treat SAA have not worked well enough

PROMACTA is used to try to raise platelet counts in order to lower your risk for bleeding.

948

949 PROMACTA is not used to make platelet counts normal.

950

951 PROMACTA is for treatment of certain people with low platelet counts caused by chronic ITP,
952 chronic HCV, or SAA, not low platelet counts caused by other conditions or diseases.

953

954 It is not known if PROMACTA is safe and effective when used with other antiviral medicines that
955 are approved to treat chronic hepatitis C.

956

957 It is not known if PROMACTA is safe and effective in children with chronic hepatitis C or severe
958 aplastic anemia or in children younger than 6 years with ITP.

959

960 **What should I tell my healthcare provider before taking PROMACTA?**

961

962 **Before you take PROMACTA, tell your healthcare provider if you:**

- 963 • have liver or kidney problems
- 964 • have or had a blood clot
- 965 • have a history of cataracts
- 966 • have had surgery to remove your spleen (splenectomy)
- 967 • have bleeding problems
- 968 • are Asian and you are of Chinese, Japanese, Taiwanese, or Korean ancestry. You may
969 need a lower dose of PROMACTA.
- 970 • have any other medical conditions
- 971 • are pregnant or plan to become pregnant. It is not known if PROMACTA will harm an unborn
972 baby.
- 973 • are breastfeeding or plan to breastfeed. It is not known if PROMACTA passes into your
974 breast milk. You and your healthcare provider should decide whether you will take
975 PROMACTA or breastfeed. You should not do both.

976

977 **Tell your healthcare provider about all the medicines you take**, including prescription and
978 over-the-counter medicines, vitamins, and herbal supplements. PROMACTA may affect the way
979 certain medicines work. Certain other medicines may affect the way PROMACTA works.

980

981 Especially tell your healthcare provider if you take:

- 982 • certain medicines used to treat high cholesterol, called “statins”.
- 983 • a blood thinner medicine.

984

985 Certain medicines may keep PROMACTA from working correctly. Take PROMACTA at least 4
986 hours before or 4 hours after taking these products:

- 987 • antacids used to treat stomach ulcers or heartburn

- 988 • multivitamins or products that contain iron, calcium, aluminum, magnesium, selenium, and
989 zinc which may be found in mineral supplements

990

991 Ask your healthcare provider if you are not sure if your medicine is one that is listed above.

992

993 Know the medicines you take. Keep a list of them and show it to your healthcare provider and
994 pharmacist when you get a new medicine.

995

996 **How should I take PROMACTA?**

997

- 998 • Take PROMACTA exactly as your healthcare provider tells you to take it. Do not stop taking
999 PROMACTA without talking with your healthcare provider first. Do not change your dose or
1000 schedule for taking PROMACTA unless your healthcare provider tells you to change it.
- 1001 • Take PROMACTA on an empty stomach, either 1 hour before or 2 hours after eating food.
- 1002 • Take PROMACTA at least 4 hours before or 4 hours after eating dairy products and
1003 calcium-fortified juices.
- 1004 • If you miss a dose of PROMACTA, wait and take your next scheduled dose. Do not take
1005 more than one dose of PROMACTA in one day.
- 1006 • If you take too much PROMACTA, you may have a higher risk of serious side effects. Call
1007 your healthcare provider right away.
- 1008 • Your healthcare provider will check your platelet count during your treatment with
1009 PROMACTA and change your dose of PROMACTA as needed.
- 1010 • Tell your healthcare provider about any bruising or bleeding that happens while you take
1011 and after you stop taking PROMACTA.

1012

1013 **What should I avoid while taking PROMACTA?**

1014

1015 Avoid situations and medicines that may increase your risk of bleeding.

1016

1017 **What are the possible side effects of PROMACTA?**

1018

1019 PROMACTA may cause serious side effects, including:

1020

- 1021 • See “**What is the most important information I should know about PROMACTA?**”
- 1022 • **Abnormal liver function tests.** Your healthcare provider will order blood tests to check
1023 your liver before you start taking PROMACTA and during your treatment. In some cases
1024 treatment with PROMACTA may need to be stopped due to changes in your liver function
1025 tests.
- 1026 • **High platelet counts and higher risk for blood clots.** Your risk of getting a blood clot is
1027 increased if your platelet count is too high during treatment with PROMACTA. Your risk of

1028 getting a blood clot may also be increased during treatment with PROMACTA if you have
1029 normal or low platelet counts. You may have severe problems or die from some forms of
1030 blood clots, such as clots that travel to the lungs or that cause heart attacks or strokes. Your
1031 healthcare provider will check your blood platelet counts, and change your dose or stop
1032 PROMACTA if your platelet counts get too high. Tell your healthcare provider right away if
1033 you have signs and symptoms of a blood clot in the leg, such as swelling, pain, or
1034 tenderness in your leg.

1035 People with chronic liver disease may be at risk for a type of blood clot in the stomach area.
1036 Tell your healthcare provider right away if you have stomach area pain that may be a
1037 symptom of this type of blood clot.

1038 • **New or worsened cataracts (a clouding of the lens in the eye).** New or worsened
1039 cataracts have happened in people taking PROMACTA. Your healthcare provider will check
1040 your eyes before and during your treatment with PROMACTA. Tell your healthcare provider
1041 about any changes in your eyesight while taking PROMACTA.

1042

1043 **The most common side effects of PROMACTA in adults when used to treat chronic ITP**
1044 **are:**

- | | |
|--|---------------------------------------|
| 1045 • nausea | • pain or swelling (inflammation) in |
| 1046 • diarrhea | your throat or mouth (oropharyngeal |
| 1047 • upper respiratory tract infection. | pain and pharyngitis) |
| 1048 Symptoms may include runny nose, | • abnormal liver function tests |
| 1049 stuffy nose, and sneezing | • back pain |
| 1050 • vomiting | • "flu"-like symptoms (influenza) |
| 1051 • muscle aches | including fever, headache, tiredness, |
| 1052 • urinary tract infection. Symptoms | cough, sore throat, and body aches |
| 1053 may include frequent or urgent need | • skin tingling, itching, or burning |
| 1054 to urinate, low fever in some people, | • rash |
| 1055 pain or burning with urination. | |

1056

1057 **The most common side effects of PROMACTA in children 6 years and older when used to**
1058 **treat chronic ITP are:**

1059

- | | |
|--|--------------------------------------|
| 1060 • upper respiratory tract infection. | • pain or swelling (inflammation) in |
| 1061 Symptoms may include runny nose, | your throat or mouth (oropharyngeal |
| 1062 stuffy nose, and sneezing. | pain) |
| 1063 • pain or swelling (inflammation) in | • toothache |
| 1064 your nose or throat (nasopharyngitis) | • abnormal liver function tests |
| 1065 • runny, stuffy nose (rhinitis) | • diarrhea |
| 1066 • stomach (abdominal) pain | • rash |
| 1067 • cough | • vitamin D deficiency |

1068

1069 **The most common side effects when PROMACTA is used in combination with other**
1070 **medicines to treat chronic HCV are:**

- | | | |
|------|---------------------------------------|--------------------------------------|
| 1071 | • low red blood cell count (anemia) | • feeling weak |
| 1072 | • fever | • trouble sleeping |
| 1073 | • tiredness | • cough |
| 1074 | • headache | • itching |
| 1075 | • nausea | • chills |
| 1076 | • diarrhea | • muscle aches |
| 1077 | • decreased appetite | • hair loss |
| 1078 | • “flu”-like symptoms (influenza) | • swelling in your ankles, feet, and |
| 1079 | including fever, headache, tiredness, | legs |
| 1080 | cough, sore throat, and body aches | |

1081

1082 **The most common side effects when PROMACTA is used to treat severe aplastic anemia**
1083 **are:**

- | | | |
|------|-------------------------------------|---------------------------------|
| 1084 | • nausea | • dizziness |
| 1085 | • feeling tired | • pain in the nose or throat |
| 1086 | • cough | • abdominal pain |
| 1087 | • diarrhea | • bruising |
| 1088 | • headache | • muscle spasms |
| 1089 | • pain in arms, legs, hands or feet | • abnormal liver function tests |
| 1090 | • shortness of breath | • joint pain |
| 1091 | • fever | • runny nose |

1092

1093 Laboratory tests may show abnormal changes to the cells in your bone marrow.

1094

1095 Tell your healthcare provider if you have any side effect that bothers you or that does not go
1096 away.

1097

1098 These are not all the possible side effects of PROMACTA. For more information, ask your
1099 healthcare provider or pharmacist.

1100

1101 Call your doctor for medical advice about side effects. You may report side effects to FDA at 1-
1102 800-FDA-1088.

1103

1104 **How should I store PROMACTA tablets?**

1105

- 1106 • Store PROMACTA tablets at room temperature between 68°F to 77°F (20°C to 25°C).
- 1107 • Keep PROMACTA tightly closed in the bottle given to you.
- 1108 • The PROMACTA bottle may contain a desiccant pack to help keep your medicine dry. Do

1109 not remove the desiccant pack from the bottle.

1110

1111 **Keep PROMACTA and all medicines out of the reach of children.**

1112

1113 **General information about the safe and effective use of PROMACTA**

1114

1115 Medicines are sometimes prescribed for purposes other than those listed in a Medication Guide.

1116 Do not use PROMACTA for a condition for which it was not prescribed. Do not give

1117 PROMACTA to other people, even if they have the same symptoms that you have. It may harm
1118 them.

1119

1120 This Medication Guide summarizes the most important information about PROMACTA. If you
1121 would like more information, talk with your healthcare provider. You can ask your healthcare
1122 provider or pharmacist for information about PROMACTA that is written for health professionals.

1123

1124 For more information about PROMACTA, go to www.PROMACTA.com or call 1-888-825-5249.

1125

1126 **What are the ingredients in PROMACTA?**

1127

1128 **Active ingredient:** eltrombopag olamine.

1129 **Inactive ingredients:**

- 1130 • **Tablet Core:** magnesium stearate, mannitol, microcrystalline cellulose, povidone, and
1131 sodium starch glycolate.
- 1132 • **Coating:** hypromellose (12.5-mg, 25-mg, 50-mg, and 75-mg tablets) or polyvinyl alcohol and
1133 talc (100-mg tablet), polyethylene glycol 400, titanium dioxide, polysorbate 80 (12.5-mg
1134 tablet), and FD&C Yellow No. 6 aluminum lake (25-mg tablet), FD&C Blue No. 2 aluminum
1135 lake (50-mg tablet), Iron Oxide Red and Iron Oxide Black (75-mg tablet), or Iron Oxide
1136 Yellow and Iron Oxide Black (100-mg tablet).

1137

1138 **This Medication Guide has been approved by the U.S. Food and Drug Administration.**

1139

1140 PROMACTA is a registered trademark of the GSK group of companies.

1141



1142

1143 GlaxoSmithKline

1144 Research Triangle Park, NC 27709

1145

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1147

1148 Revised: Month Year

1149 PRM:XMG