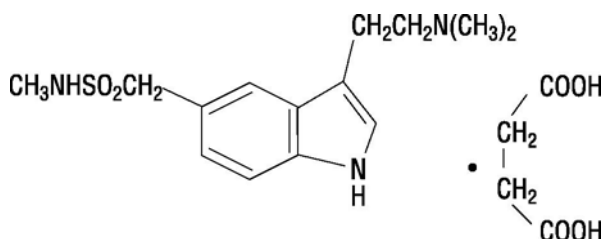


PRESCRIBING INFORMATION

1 2 **IMITREX[®]** 3 **(sumatriptan succinate)** 4 **Tablets**

5 **DESCRIPTION**

6 IMITREX Tablets contain sumatriptan (as the succinate), a selective 5-hydroxytryptamine₁
7 receptor subtype agonist. Sumatriptan succinate is chemically designated as 3-[2-
8 (dimethylamino)ethyl]-N-methyl-indole-5-methanesulfonamide succinate (1:1), and it has the
9 following structure:
10



11
12
13 The empirical formula is C₁₄H₂₁N₃O₂S•C₄H₆O₄, representing a molecular weight of 413.5.
14 Sumatriptan succinate is a white to off-white powder that is readily soluble in water and in
15 saline. Each IMITREX Tablet for oral administration contains 35, 70, or 140 mg of sumatriptan
16 succinate equivalent to 25, 50, or 100 mg of sumatriptan, respectively. Each tablet also contains
17 the inactive ingredients croscarmellose sodium, dibasic calcium phosphate, magnesium stearate,
18 microcrystalline cellulose, and sodium bicarbonate. Each 100-mg tablet also contains
19 hypromellose, iron oxide, titanium dioxide, and triacetin.

20 **CLINICAL PHARMACOLOGY**

21 **Mechanism of Action:** Sumatriptan is an agonist for a vascular 5-hydroxytryptamine₁
22 receptor subtype (probably a member of the 5-HT_{1D} family) having only a weak affinity for
23 5-HT_{1A}, 5-HT_{5A}, and 5-HT₇ receptors and no significant affinity (as measured using standard
24 radioligand binding assays) or pharmacological activity at 5-HT₂, 5-HT₃, or 5-HT₄ receptor
25 subtypes or at alpha₁-, alpha₂-, or beta-adrenergic; dopamine₁; dopamine₂; muscarinic; or
26 benzodiazepine receptors.

27 The vascular 5-HT₁ receptor subtype that sumatriptan activates is present on cranial arteries in
28 both dog and primate, on the human basilar artery, and in the vasculature of human dura mater
29 and mediates vasoconstriction. This action in humans correlates with the relief of migraine
30 headache. In addition to causing vasoconstriction, experimental data from animal studies show
31 that sumatriptan also activates 5-HT₁ receptors on peripheral terminals of the trigeminal nerve
32 innervating cranial blood vessels. Such an action may also contribute to the antimigrainous effect
33 of sumatriptan in humans.

34 In the anesthetized dog, sumatriptan selectively reduces the carotid arterial blood flow with
35 little or no effect on arterial blood pressure or total peripheral resistance. In the cat, sumatriptan
36 selectively constricts the carotid arteriovenous anastomoses while having little effect on blood
37 flow or resistance in cerebral or extracerebral tissues.

38 **Pharmacokinetics:** The mean maximum concentration following oral dosing with 25 mg is
39 18 ng/mL (range, 7 to 47 ng/mL) and 51 ng/mL (range, 28 to 100 ng/mL) following oral dosing
40 with 100 mg of sumatriptan. This compares with a C_{max} of 5 and 16 ng/mL following dosing
41 with a 5- and 20-mg intranasal dose, respectively. The mean C_{max} following a 6-mg
42 subcutaneous injection is 71 ng/mL (range, 49 to 110 ng/mL). The bioavailability is
43 approximately 15%, primarily due to presystemic metabolism and partly due to incomplete
44 absorption. The C_{max} is similar during a migraine attack and during a migraine-free period, but
45 the T_{max} is slightly later during the attack, approximately 2.5 hours compared to 2.0 hours. When
46 given as a single dose, sumatriptan displays dose proportionality in its extent of absorption (area
47 under the curve [AUC]) over the dose range of 25 to 200 mg, but the C_{max} after 100 mg is
48 approximately 25% less than expected (based on the 25-mg dose).

49 A food effect study involving administration of IMITREX Tablets 100 mg to healthy
50 volunteers under fasting conditions and with a high-fat meal indicated that the C_{max} and AUC
51 were increased by 15% and 12%, respectively, when administered in the fed state.

52 Plasma protein binding is low (14% to 21%). The effect of sumatriptan on the protein binding
53 of other drugs has not been evaluated, but would be expected to be minor, given the low rate of
54 protein binding. The apparent volume of distribution is 2.4 L/kg.

55 The elimination half-life of sumatriptan is approximately 2.5 hours. Radiolabeled
56 ^{14}C -sumatriptan administered orally is largely renally excreted (about 60%) with about 40%
57 found in the feces. Most of the radiolabeled compound excreted in the urine is the major
58 metabolite, indole acetic acid (IAA), which is inactive, or the IAA glucuronide. Only 3% of the
59 dose can be recovered as unchanged sumatriptan.

60 In vitro studies with human microsomes suggest that sumatriptan is metabolized by
61 monoamine oxidase (MAO), predominantly the A isoenzyme, and inhibitors of that enzyme may
62 alter sumatriptan pharmacokinetics to increase systemic exposure. No significant effect was seen
63 with an MAO-B inhibitor (see CONTRAINDICATIONS, WARNINGS, and PRECAUTIONS:
64 Drug Interactions).

65 **Special Populations: Renal Impairment:** The effect of renal impairment on the
66 pharmacokinetics of sumatriptan has not been examined, but little clinical effect would be
67 expected as sumatriptan is largely metabolized to an inactive substance.

68 **Hepatic Impairment:** The liver plays an important role in the presystemic clearance of
69 orally administered sumatriptan. Accordingly, the bioavailability of sumatriptan following oral
70 administration may be markedly increased in patients with liver disease. In 1 small study of
71 hepatically impaired patients (N = 8) matched for sex, age, and weight with healthy subjects, the
72 hepatically impaired patients had an approximately 70% increase in AUC and C_{max} and a T_{max}
73 40 minutes earlier compared to the healthy subjects (see DOSAGE AND ADMINISTRATION).

74 **Age:** The pharmacokinetics of oral sumatriptan in the elderly (mean age, 72 years; 2 males
75 and 4 females) and in patients with migraine (mean age, 38 years; 25 males and 155 females)
76 were similar to that in healthy male subjects (mean age, 30 years) (see PRECAUTIONS:
77 Geriatric Use).

78 **Gender:** In a study comparing females to males, no pharmacokinetic differences were
79 observed between genders for AUC, C_{max} , T_{max} , and half-life.

80 **Race:** The systemic clearance and C_{max} of sumatriptan were similar in black (N = 34) and
81 Caucasian (N = 38) healthy male subjects.

82 **Drug Interactions: Monoamine Oxidase Inhibitors:** Treatment with MAO-A inhibitors
83 generally leads to an increase of sumatriptan plasma levels (see CONTRAINDICATIONS and
84 PRECAUTIONS).

85 Due to gut and hepatic metabolic first-pass effects, the increase of systemic exposure after
86 coadministration of an MAO-A inhibitor with oral sumatriptan is greater than after
87 coadministration of the monoamine oxidase inhibitors (MAOI) with subcutaneous sumatriptan.
88 In a study of 14 healthy females, pretreatment with an MAO-A inhibitor decreased the clearance
89 of subcutaneous sumatriptan. Under the conditions of this experiment, the result was a 2-fold
90 increase in the area under the sumatriptan plasma concentration x time curve (AUC),
91 corresponding to a 40% increase in elimination half-life. This interaction was not evident with an
92 MAO-B inhibitor.

93 A small study evaluating the effect of pretreatment with an MAO-A inhibitor on the
94 bioavailability from a 25-mg oral sumatriptan tablet resulted in an approximately 7-fold increase
95 in systemic exposure.

96 **Alcohol:** Alcohol consumed 30 minutes prior to sumatriptan ingestion had no effect on the
97 pharmacokinetics of sumatriptan.

98 **CLINICAL STUDIES**

99 The efficacy of IMITREX Tablets in the acute treatment of migraine headaches was
100 demonstrated in 3, randomized, double-blind, placebo-controlled studies. Patients enrolled in
101 these 3 studies were predominately female (87%) and Caucasian (97%), with a mean age of
102 40 years (range, 18 to 65 years). Patients were instructed to treat a moderate to severe headache.
103 Headache response, defined as a reduction in headache severity from moderate or severe pain to
104 mild or no pain, was assessed up to 4 hours after dosing. Associated symptoms such as nausea,
105 photophobia, and phonophobia were also assessed. Maintenance of response was assessed for up
106 to 24 hours postdose. A second dose of IMITREX Tablets or other medication was allowed 4 to
107 24 hours after the initial treatment for recurrent headache. Acetaminophen was offered to
108 patients in Studies 2 and 3 beginning at 2 hours after initial treatment if the migraine pain had not
109 improved or worsened. Additional medications were allowed 4 to 24 hours after the initial
110 treatment for recurrent headache or as rescue in all 3 studies. The frequency and time to use of
111 these additional treatments were also determined. In all studies, doses of 25, 50, and 100 mg

112 were compared to placebo in the treatment of migraine attacks. In 1 study, doses of 25, 50, and
113 100 mg were also compared to each other.

114 In all 3 trials, the percentage of patients achieving headache response 2 and 4 hours after
115 treatment was significantly greater among patients receiving IMITREX Tablets at all doses
116 compared to those who received placebo. In 1 of the 3 studies, there was a statistically significant
117 greater percentage of patients with headache response at 2 and 4 hours in the 50- or 100-mg
118 group when compared to the 25-mg dose groups. There were no statistically significant
119 differences between the 50- and 100-mg dose groups in any study. The results from the 3
120 controlled clinical trials are summarized in Table 1.

121 **Comparisons of drug performance based upon results obtained in different clinical trials**
122 **are never reliable. Because studies are conducted at different times, with different samples**
123 **of patients, by different investigators, employing different criteria and/or different**
124 **interpretations of the same criteria, under different conditions (dose, dosing regimen, etc.),**
125 **quantitative estimates of treatment response and the timing of response may be expected to**
126 **vary considerably from study to study.**

127

128 **Table 1. Percentage of Patients With Headache Response (No or Mild Pain) 2 and 4 Hours**
129 **Following Treatment**

	Placebo		IMITREX Tablets 25 mg		IMITREX Tablets 50 mg		IMITREX Tablets 100 mg	
	2 hr	4 hr	2 hr	4 hr	2 hr	4 hr	2 hr	4 hr
Study 1	27%	38%	52%*	67%*	61%*†	78%*†	62%*†	79%*†
	(N = 94)		(N = 298)		(N = 296)		(N = 296)	
Study 2	26%	38%	52%*	70%*	50%*	68%*	56%*	71%*
	(N = 65)		(N = 66)		(N = 62)		(N = 66)	
Study 3	17%	19%	52%*	65%*	54%*	72%*	57%*	78%*
	(N = 47)		(N = 48)		(N = 46)		(N = 46)	

130 *p<0.05 in comparison with placebo.

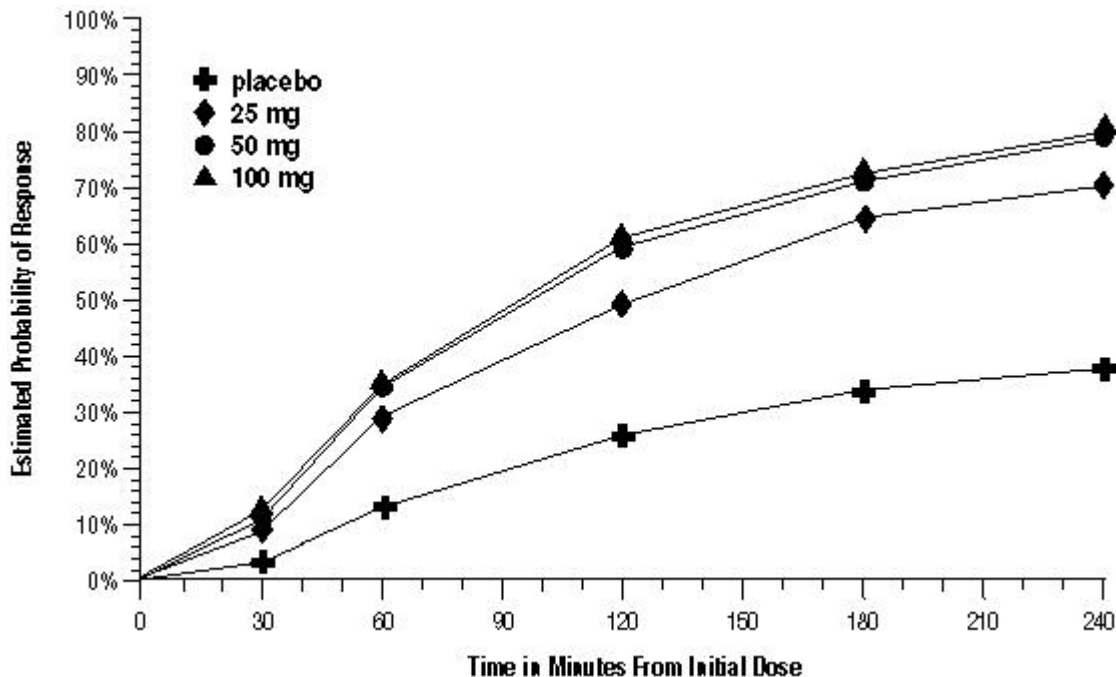
131 †p<0.05 in comparison with 25 mg.

132

133 The estimated probability of achieving an initial headache response over the 4 hours following
134 treatment is depicted in Figure 1.

135

136 **Figure 1. Estimated Probability of Achieving Initial Headache Response Within**
137 **240 Minutes***
138



139
140

141 * The figure shows the probability over time of obtaining headache response (no or mild pain)
142 following treatment with sumatriptan. The averages displayed are based on pooled data from
143 the 3 clinical controlled trials providing evidence of efficacy. Kaplan-Meier plot with patients
144 not achieving response and/or taking rescue within 240 minutes censored to 240 minutes.

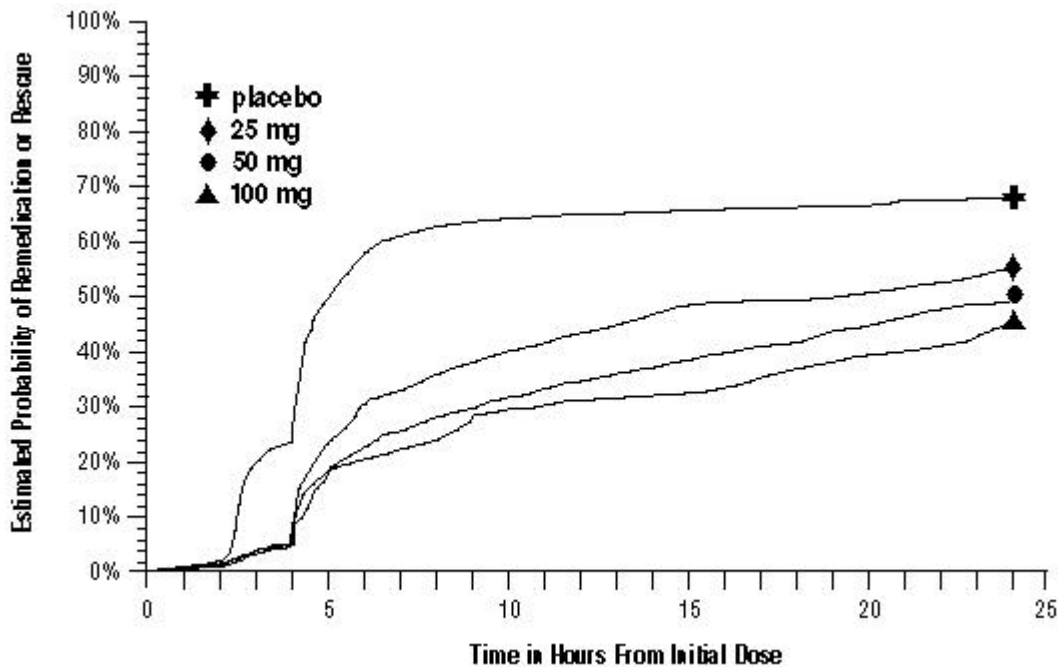
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146 For patients with migraine-associated nausea, photophobia, and/or phonophobia at baseline,
147 there was a lower incidence of these symptoms at 2 hours (Study 1) and at 4 hours (Studies 1, 2,
148 and 3) following administration of IMITREX Tablets compared to placebo.

149 As early as 2 hours in Studies 2 and 3 or 4 hours in Study 1, through 24 hours following the
150 initial dose of study treatment, patients were allowed to use additional treatment for pain relief in
151 the form of a second dose of study treatment or other medication. The estimated probability of
152 patients taking a second dose or other medication for migraine over the 24 hours following the
153 initial dose of study treatment is summarized in Figure 2.

154

155 **Figure 2. The Estimated Probability of Patients Taking a Second Dose or Other**
156 **Medication for Migraine Over the 24 Hours Following the Initial Dose of Study**
157 **Treatment***
158



159
160

161 * Kaplan-Meier plot based on data obtained in the 3 clinical controlled trials providing evidence
162 of efficacy with patients not using additional treatments censored to 24 hours. Plot also
163 includes patients who had no response to the initial dose. No remedication was allowed within
164 2 hours postdose.

165

166 There is evidence that doses above 50 mg do not provide a greater effect than 50 mg. There
167 was no evidence to suggest that treatment with sumatriptan was associated with an increase in
168 the severity of recurrent headaches. The efficacy of IMITREX Tablets was unaffected by
169 presence of aura; duration of headache prior to treatment; gender, age, or weight of the patient;
170 relationship to menses; or concomitant use of common migraine prophylactic drugs (e.g.,
171 beta-blockers, calcium channel blockers, tricyclic antidepressants). There were insufficient data
172 to assess the impact of race on efficacy.

173 **INDICATIONS AND USAGE**

174 IMITREX Tablets are indicated for the acute treatment of migraine attacks with or without
175 aura in adults.

176 IMITREX Tablets are not intended for the prophylactic therapy of migraine or for use in the
177 management of hemiplegic or basilar migraine (see CONTRAINDICATIONS). Safety and
178 effectiveness of IMITREX Tablets have not been established for cluster headache, which is
179 present in an older, predominantly male population.

180 **CONTRAINDICATIONS**

181 **IMITREX Tablets should not be given to patients with history, symptoms, or signs of**
182 **ischemic cardiac, cerebrovascular, or peripheral vascular syndromes. In addition, patients**
183 **with other significant underlying cardiovascular diseases should not receive IMITREX**
184 **Tablets. Ischemic cardiac syndromes include, but are not limited to, angina pectoris of any**
185 **type (e.g., stable angina of effort and vasospastic forms of angina such as the Prinzmetal**
186 **variant), all forms of myocardial infarction, and silent myocardial ischemia.**
187 **Cerebrovascular syndromes include, but are not limited to, strokes of any type as well as**
188 **transient ischemic attacks. Peripheral vascular disease includes, but is not limited to,**
189 **ischemic bowel disease (see WARNINGS).**

190 **Because IMITREX Tablets may increase blood pressure, they should not be given to**
191 **patients with uncontrolled hypertension.**

192 **Concurrent administration of MAO-A inhibitors or use within 2 weeks of**
193 **discontinuation of MAO-A inhibitor therapy is contraindicated (see CLINICAL**
194 **PHARMACOLOGY: Drug Interactions and PRECAUTIONS: Drug Interactions).**

195 **IMITREX Tablets should not be administered to patients with hemiplegic or basilar**
196 **migraine.**

197 **IMITREX Tablets and any ergotamine-containing or ergot-type medication (like**
198 **dihydroergotamine or methysergide) should not be used within 24 hours of each other, nor**
199 **should IMITREX and another 5-HT₁ agonist.**

200 **IMITREX Tablets are contraindicated in patients with hypersensitivity to sumatriptan**
201 **or any of their components.**

202 **IMITREX Tablets are contraindicated in patients with severe hepatic impairment.**

203 **WARNINGS**

204 **IMITREX Tablets should only be used where a clear diagnosis of migraine headache has**
205 **been established.**

206 **Risk of Myocardial Ischemia and/or Infarction and Other Adverse Cardiac Events:**
207 **Sumatriptan should not be given to patients with documented ischemic or vasospastic**
208 **coronary artery disease (CAD) (see CONTRAINDICATIONS). It is strongly recommended**
209 **that sumatriptan not be given to patients in whom unrecognized CAD is predicted by the**
210 **presence of risk factors (e.g., hypertension, hypercholesterolemia, smoker, obesity,**
211 **diabetes, strong family history of CAD, female with surgical or physiological menopause,**
212 **or male over 40 years of age) unless a cardiovascular evaluation provides satisfactory**
213 **clinical evidence that the patient is reasonably free of coronary artery and ischemic**
214 **myocardial disease or other significant underlying cardiovascular disease. The sensitivity**
215 **of cardiac diagnostic procedures to detect cardiovascular disease or predisposition to**
216 **coronary artery vasospasm is modest, at best. If, during the cardiovascular evaluation, the**
217 **patient's medical history or electrocardiographic investigations reveal findings indicative**

218 of, or consistent with, coronary artery vasospasm or myocardial ischemia, sumatriptan
219 should not be administered (see CONTRAINDICATIONS).

220 For patients with risk factors predictive of CAD, who are determined to have a
221 satisfactory cardiovascular evaluation, it is strongly recommended that administration of
222 the first dose of sumatriptan tablets take place in the setting of a physician's office or
223 similar medically staffed and equipped facility unless the patient has previously received
224 sumatriptan. Because cardiac ischemia can occur in the absence of clinical symptoms,
225 consideration should be given to obtaining on the first occasion of use an electrocardiogram
226 (ECG) during the interval immediately following IMITREX Tablets, in these patients with
227 risk factors.

228 It is recommended that patients who are intermittent long-term users of sumatriptan
229 and who have or acquire risk factors predictive of CAD, as described above, undergo
230 periodic interval cardiovascular evaluation as they continue to use sumatriptan.

231 The systematic approach described above is intended to reduce the likelihood that
232 patients with unrecognized cardiovascular disease will be inadvertently exposed to
233 sumatriptan.

234 **Drug-Associated Cardiac Events and Fatalities:** Serious adverse cardiac events,
235 including acute myocardial infarction, life-threatening disturbances of cardiac rhythm, and death
236 have been reported within a few hours following the administration of IMITREX[®] (sumatriptan
237 succinate) Injection or IMITREX Tablets. Considering the extent of use of sumatriptan in
238 patients with migraine, the incidence of these events is extremely low.

239 The fact that sumatriptan can cause coronary vasospasm, that some of these events have
240 occurred in patients with no prior cardiac disease history and with documented absence of CAD,
241 and the close proximity of the events to sumatriptan use support the conclusion that some of
242 these cases were caused by the drug. In many cases, however, where there has been known
243 underlying coronary artery disease, the relationship is uncertain.

244 **Premarketing Experience With Sumatriptan:** Of 6,348 patients with migraine who
245 participated in premarketing controlled and uncontrolled clinical trials of oral sumatriptan, 2
246 experienced clinical adverse events shortly after receiving oral sumatriptan that may have
247 reflected coronary vasospasm. Neither of these adverse events was associated with a serious
248 clinical outcome.

249 Among the more than 1,900 patients with migraine who participated in premarketing
250 controlled clinical trials of subcutaneous sumatriptan, there were 8 patients who sustained
251 clinical events during or shortly after receiving sumatriptan that may have reflected coronary
252 artery vasospasm. Six of these 8 patients had ECG changes consistent with transient ischemia,
253 but without accompanying clinical symptoms or signs. Of these 8 patients, 4 had either findings
254 suggestive of CAD or risk factors predictive of CAD prior to study enrollment.

255 Among approximately 4,000 patients with migraine who participated in premarketing
256 controlled and uncontrolled clinical trials of sumatriptan nasal spray, 1 patient experienced an
257 asymptomatic subendocardial infarction possibly subsequent to a coronary vasospastic event.

258 **Postmarketing Experience With Sumatriptan:** Serious cardiovascular events, some
259 resulting in death, have been reported in association with the use of IMITREX Injection or
260 IMITREX Tablets. The uncontrolled nature of postmarketing surveillance, however, makes it
261 impossible to determine definitively the proportion of the reported cases that were actually
262 caused by sumatriptan or to reliably assess causation in individual cases. On clinical grounds, the
263 longer the latency between the administration of IMITREX and the onset of the clinical event,
264 the less likely the association is to be causative. Accordingly, interest has focused on events
265 beginning within 1 hour of the administration of IMITREX.

266 Cardiac events that have been observed to have onset within 1 hour of sumatriptan
267 administration include: coronary artery vasospasm, transient ischemia, myocardial infarction,
268 ventricular tachycardia and ventricular fibrillation, cardiac arrest, and death.

269 Some of these events occurred in patients who had no findings of CAD and appear to
270 represent consequences of coronary artery vasospasm. However, among domestic reports of
271 serious cardiac events within 1 hour of sumatriptan administration, almost all of the patients had
272 risk factors predictive of CAD and the presence of significant underlying CAD was established
273 in most cases (see CONTRAINDICATIONS).

274 **Drug-Associated Cerebrovascular Events and Fatalities:** Cerebral hemorrhage,
275 subarachnoid hemorrhage, stroke, and other cerebrovascular events have been reported in
276 patients treated with oral or subcutaneous sumatriptan, and some have resulted in fatalities. The
277 relationship of sumatriptan to these events is uncertain. In a number of cases, it appears possible
278 that the cerebrovascular events were primary, sumatriptan having been administered in the
279 incorrect belief that the symptoms experienced were a consequence of migraine when they were
280 not. As with other acute migraine therapies, before treating headaches in patients not previously
281 diagnosed as migraineurs, and in migraineurs who present with atypical symptoms, care should
282 be taken to exclude other potentially serious neurological conditions. It should also be noted that
283 patients with migraine may be at increased risk of certain cerebrovascular events (e.g.,
284 cerebrovascular accident, transient ischemic attack).

285 **Other Vasospasm-Related Events:** Sumatriptan may cause vasospastic reactions other than
286 coronary artery vasospasm. Both peripheral vascular ischemia and colonic ischemia with
287 abdominal pain and bloody diarrhea have been reported. Very rare reports of transient and
288 permanent blindness and significant partial vision loss have been reported with the use of
289 sumatriptan. Visual disorders may also be part of a migraine attack.

290 **Serotonin Syndrome:** The development of a potentially life-threatening serotonin syndrome
291 may occur with triptans, including treatment with IMITREX, particularly during combined use
292 with selective serotonin reuptake inhibitors (SSRIs) or serotonin norepinephrine reuptake
293 inhibitors (SNRIs). If concomitant treatment with sumatriptan and an SSRI (e.g., fluoxetine,
294 paroxetine, sertraline, fluvoxamine, citalopram, escitalopram) or SNRI (e.g., venlafaxine,
295 duloxetine) is clinically warranted, careful observation of the patient is advised, particularly
296 during treatment initiation and dose increases. Serotonin syndrome symptoms may include
297 mental status changes (e.g., agitation, hallucinations, coma), autonomic instability (e.g.,

298 tachycardia, labile blood pressure, hyperthermia), neuromuscular aberrations (e.g., hyperreflexia,
299 incoordination), and/or gastrointestinal symptoms (e.g., nausea, vomiting, diarrhea).

300 **Increase in Blood Pressure:** Significant elevation in blood pressure, including hypertensive
301 crisis, has been reported on rare occasions in patients with and without a history of hypertension.
302 Sumatriptan is contraindicated in patients with uncontrolled hypertension (see
303 CONTRAINDICATIONS). Sumatriptan should be administered with caution to patients with
304 controlled hypertension as transient increases in blood pressure and peripheral vascular resistance
305 have been observed in a small proportion of patients.

306 **Concomitant Drug Use:** In patients taking MAO-A inhibitors, sumatriptan plasma levels
307 attained after treatment with recommended doses are 7-fold higher following oral administration
308 than those obtained under other conditions. Accordingly, the coadministration of IMITREX
309 Tablets and an MAO-A inhibitor is contraindicated (see CLINICAL PHARMACOLOGY and
310 CONTRAINDICATIONS).

311 **Hypersensitivity:** Hypersensitivity (anaphylaxis/anaphylactoid) reactions have occurred on
312 rare occasions in patients receiving sumatriptan. Such reactions can be life threatening or fatal. In
313 general, hypersensitivity reactions to drugs are more likely to occur in individuals with a history
314 of sensitivity to multiple allergens (see CONTRAINDICATIONS).

315 **PRECAUTIONS**

316 **General:** Chest discomfort and jaw or neck tightness have been reported following use of
317 IMITREX Tablets and have also been reported infrequently following administration of
318 IMITREX Nasal Spray. Chest, jaw, or neck tightness is relatively common after administration
319 of IMITREX Injection. Only rarely have these symptoms been associated with ischemic ECG
320 changes. However, because sumatriptan may cause coronary artery vasospasm, patients who
321 experience signs or symptoms suggestive of angina following sumatriptan should be evaluated
322 for the presence of CAD or a predisposition to Prinzmetal variant angina before receiving
323 additional doses of sumatriptan, and should be monitored electrocardiographically if dosing is
324 resumed and similar symptoms recur. Similarly, patients who experience other symptoms or
325 signs suggestive of decreased arterial flow, such as ischemic bowel syndrome or Raynaud
326 syndrome following sumatriptan should be evaluated for atherosclerosis or predisposition to
327 vasospasm (see WARNINGS).

328 IMITREX should also be administered with caution to patients with diseases that may alter
329 the absorption, metabolism, or excretion of drugs, such as impaired hepatic or renal function.

330 There have been rare reports of seizure following administration of sumatriptan. Sumatriptan
331 should be used with caution in patients with a history of epilepsy or conditions associated with a
332 lowered seizure threshold.

333 Care should be taken to exclude other potentially serious neurologic conditions before treating
334 headache in patients not previously diagnosed with migraine headache or who experience a
335 headache that is atypical for them. There have been rare reports where patients received

336 sumatriptan for severe headaches that were subsequently shown to have been secondary to an
337 evolving neurologic lesion (see WARNINGS).

338 For a given attack, if a patient does not respond to the first dose of sumatriptan, the diagnosis
339 of migraine should be reconsidered before administration of a second dose.

340 **Binding to Melanin-Containing Tissues:** In rats treated with a single subcutaneous dose
341 (0.5 mg/kg) or oral dose (2 mg/kg) of radiolabeled sumatriptan, the elimination half-life of
342 radioactivity from the eye was 15 and 23 days, respectively, suggesting that sumatriptan and/or
343 its metabolites bind to the melanin of the eye. Because there could be an accumulation in
344 melanin-rich tissues over time, this raises the possibility that sumatriptan could cause toxicity in
345 these tissues after extended use. However, no effects on the retina related to treatment with
346 sumatriptan were noted in any of the oral or subcutaneous toxicity studies. Although no
347 systematic monitoring of ophthalmologic function was undertaken in clinical trials, and no
348 specific recommendations for ophthalmologic monitoring are offered, prescribers should be
349 aware of the possibility of long-term ophthalmologic effects.

350 **Corneal Opacities:** Sumatriptan causes corneal opacities and defects in the corneal epithelium
351 in dogs; this raises the possibility that these changes may occur in humans. While patients were
352 not systematically evaluated for these changes in clinical trials, and no specific recommendations
353 for monitoring are being offered, prescribers should be aware of the possibility of these changes
354 (see ANIMAL TOXICOLOGY).

355 **Information for Patients:** See PATIENT INFORMATION at the end of this labeling for the
356 text of the separate leaflet provided for patients.

357 Patients should be cautioned about the risk of serotonin syndrome with the use of sumatriptan
358 or other triptans, especially during combined use with SSRIs or SNRIs.

359 **Laboratory Tests:** No specific laboratory tests are recommended for monitoring patients prior
360 to and/or after treatment with sumatriptan.

361 **Drug Interactions: Selective Serotonin Reuptake Inhibitors/Serotonin**

362 **Norepinephrine Reuptake Inhibitors and Serotonin Syndrome:** Cases of
363 life-threatening serotonin syndrome have been reported during combined use of SSRIs or SNRIs
364 and triptans (see WARNINGS).

365 **Ergot-Containing Drugs:** Ergot-containing drugs have been reported to cause prolonged
366 vasospastic reactions. Because there is a theoretical basis that these effects may be additive, use
367 of ergotamine-containing or ergot-type medications (like dihydroergotamine or methysergide)
368 and sumatriptan within 24 hours of each other should be avoided (see
369 CONTRAINDICATIONS).

370 **Monoamine Oxidase-A Inhibitors:** MAO-A inhibitors reduce sumatriptan clearance,
371 significantly increasing systemic exposure. Therefore, the use of IMITREX Tablets in patients
372 receiving MAO-A inhibitors is contraindicated (see CLINICAL PHARMACOLOGY and
373 CONTRAINDICATIONS).

374 **Drug/Laboratory Test Interactions:** IMITREX Tablets are not known to interfere with
375 commonly employed clinical laboratory tests.

376 **Carcinogenesis, Mutagenesis, Impairment of Fertility: *Carcinogenesis:*** In
377 carcinogenicity studies, rats and mice were given sumatriptan by oral gavage (rats, 104 weeks) or
378 drinking water (mice, 78 weeks). Average exposures achieved in mice receiving the highest dose
379 (target dose of 160 mg/kg/day) were approximately 40 times the exposure attained in humans
380 after the maximum recommended single oral dose of 100 mg. The highest dose administered to
381 rats (160 mg/kg/day, reduced from 360 mg/kg/day during week 21) was approximately 15 times
382 the maximum recommended single human oral dose of 100 mg on a mg/m² basis. There was no
383 evidence of an increase in tumors in either species related to sumatriptan administration.

384 ***Mutagenesis:*** Sumatriptan was not mutagenic in the presence or absence of metabolic
385 activation when tested in 2 gene mutation assays (the Ames test and the in vitro mammalian
386 Chinese hamster V79/HGPRT assay). In 2 cytogenetics assays (the in vitro human lymphocyte
387 assay and the in vivo rat micronucleus assay) sumatriptan was not associated with clastogenic
388 activity.

389 ***Impairment of Fertility:*** In a study in which male and female rats were dosed daily with
390 oral sumatriptan prior to and throughout the mating period, there was a treatment-related
391 decrease in fertility secondary to a decrease in mating in animals treated with 50 and
392 500 mg/kg/day. The highest no-effect dose for this finding was 5 mg/kg/day, or approximately
393 one half of the maximum recommended single human oral dose of 100 mg on a mg/m² basis. It
394 is not clear whether the problem is associated with treatment of the males or females or both
395 combined. In a similar study by the subcutaneous route there was no evidence of impaired
396 fertility at 60 mg/kg/day, the maximum dose tested, which is equivalent to approximately 6 times
397 the maximum recommended single human oral dose of 100 mg on a mg/m² basis.

398 ***Pregnancy:*** Pregnancy Category C. In reproductive toxicity studies in rats and rabbits, oral
399 treatment with sumatriptan was associated with embryoletality, fetal abnormalities, and pup
400 mortality. When administered by the intravenous route to rabbits, sumatriptan has been shown to
401 be embryoletal. There are no adequate and well-controlled studies in pregnant women.
402 Therefore, IMITREX should be used during pregnancy only if the potential benefit justifies the
403 potential risk to the fetus. In assessing this information, the following findings should be
404 considered.

405 ***Embryoletality:*** When given orally or intravenously to pregnant rabbits daily throughout
406 the period of organogenesis, sumatriptan caused embryoletality at doses at or close to those
407 producing maternal toxicity. In the oral studies this dose was 100 mg/kg/day, and in the
408 intravenous studies this dose was 2.0 mg/kg/day. The mechanism of the embryoletality is not
409 known. The highest no-effect dose for embryoletality by the oral route was 50 mg/kg/day,
410 which is approximately 9 times the maximum single recommended human oral dose of 100 mg
411 on a mg/m² basis. By the intravenous route, the highest no-effect dose was 0.75 mg/kg/day, or
412 approximately one tenth of the maximum single recommended human oral dose of 100 mg on a
413 mg/m² basis.

414 The intravenous administration of sumatriptan to pregnant rats throughout organogenesis at
415 12.5 mg/kg/day, the maximum dose tested, did not cause embryoletality. This dose is

416 equivalent to the maximum single recommended human oral dose of 100 mg on a mg/m² basis.
417 Additionally, in a study in rats given subcutaneous sumatriptan daily prior to and throughout
418 pregnancy at 60 mg/kg/day, the maximum dose tested, there was no evidence of increased
419 embryo/fetal lethality. This dose is equivalent to approximately 6 times the maximum
420 recommended single human oral dose of 100 mg on a mg/m² basis.

421 **Teratogenicity:** Oral treatment of pregnant rats with sumatriptan during the period of
422 organogenesis resulted in an increased incidence of blood vessel abnormalities (cervicothoracic
423 and umbilical) at doses of approximately 250 mg/kg/day or higher. The highest no-effect dose
424 was approximately 60 mg/kg/day, which is approximately 6 times the maximum single
425 recommended human oral dose of 100 mg on a mg/m² basis. Oral treatment of pregnant rabbits
426 with sumatriptan during the period of organogenesis resulted in an increased incidence of
427 cervicothoracic vascular and skeletal abnormalities. The highest no-effect dose for these effects
428 was 15 mg/kg/day, or approximately 3 times the maximum single recommended human oral
429 dose of 100 mg on a mg/m² basis.

430 A study in which rats were dosed daily with oral sumatriptan prior to and throughout gestation
431 demonstrated embryo/fetal toxicity (decreased body weight, decreased ossification, increased
432 incidence of rib variations) and an increased incidence of a syndrome of malformations (short
433 tail/short body and vertebral disorganization) at 500 mg/kg/day. The highest no-effect dose was
434 50 mg/kg/day, or approximately 5 times the maximum single recommended human oral dose of
435 100 mg on a mg/m² basis. In a study in rats dosed daily with subcutaneous sumatriptan prior to
436 and throughout pregnancy, at a dose of 60 mg/kg/day, the maximum dose tested, there was no
437 evidence of teratogenicity. This dose is equivalent to approximately 6 times the maximum
438 recommended single human oral dose of 100 mg on a mg/m² basis.

439 **Pup Deaths:** Oral treatment of pregnant rats with sumatriptan during the period of
440 organogenesis resulted in a decrease in pup survival between birth and postnatal day 4 at doses
441 of approximately 250 mg/kg/day or higher. The highest no-effect dose for this effect was
442 approximately 60 mg/kg/day, or 6 times the maximum single recommended human oral dose of
443 100 mg on a mg/m² basis.

444 Oral treatment of pregnant rats with sumatriptan from gestational day 17 through postnatal
445 day 21 demonstrated a decrease in pup survival measured at postnatal days 2, 4, and 20 at the
446 dose of 1,000 mg/kg/day. The highest no-effect dose for this finding was 100 mg/kg/day,
447 approximately 10 times the maximum single recommended human oral dose of 100 mg on a
448 mg/m² basis. In a similar study in rats by the subcutaneous route there was no increase in pup
449 death at 81 mg/kg/day, the highest dose tested, which is equivalent to 8 times the maximum
450 single recommended human oral dose of 100 mg on a mg/m² basis.

451 **Pregnancy Registry:** To monitor fetal outcomes of pregnant women exposed to
452 IMITREX, GlaxoSmithKline maintains a Sumatriptan Pregnancy Registry. Physicians are
453 encouraged to register patients by calling (800) 336-2176.

454 **Nursing Mothers:** Sumatriptan is excreted in human breast milk following subcutaneous
455 administration. Infant exposure to sumatriptan can be minimized by avoiding breastfeeding for
456 12 hours after treatment with IMITREX Tablets.

457 **Pediatric Use:** Safety and effectiveness of IMITREX Tablets in pediatric patients under 18
458 years of age have not been established; therefore, IMITREX Tablets are not recommended for
459 use in patients under 18 years of age.

460 Two controlled clinical trials evaluating sumatriptan nasal spray (5 to 20 mg) in pediatric
461 patients aged 12 to 17 years enrolled a total of 1,248 adolescent migraineurs who treated a single
462 attack. The studies did not establish the efficacy of sumatriptan nasal spray compared to placebo
463 in the treatment of migraine in adolescents. Adverse events observed in these clinical trials were
464 similar in nature to those reported in clinical trials in adults.

465 Five controlled clinical trials (2 single attack studies, 3 multiple attack studies) evaluating oral
466 sumatriptan (25 to 100 mg) in pediatric patients aged 12 to 17 years enrolled a total of 701
467 adolescent migraineurs. These studies did not establish the efficacy of oral sumatriptan compared
468 to placebo in the treatment of migraine in adolescents. Adverse events observed in these clinical
469 trials were similar in nature to those reported in clinical trials in adults. The frequency of all
470 adverse events in these patients appeared to be both dose- and age-dependent, with younger
471 patients reporting events more commonly than older adolescents.

472 Postmarketing experience documents that serious adverse events have occurred in the
473 pediatric population after use of subcutaneous, oral, and/or intranasal sumatriptan. These reports
474 include events similar in nature to those reported rarely in adults, including stroke, visual loss,
475 and death. A myocardial infarction has been reported in a 14-year-old male following the use of
476 oral sumatriptan; clinical signs occurred within 1 day of drug administration. Since clinical data
477 to determine the frequency of serious adverse events in pediatric patients who might receive
478 injectable, oral, or intranasal sumatriptan are not presently available, the use of sumatriptan in
479 patients aged younger than 18 years is not recommended.

480 **Geriatric Use:** The use of sumatriptan in elderly patients is not recommended because elderly
481 patients are more likely to have decreased hepatic function, they are at higher risk for CAD, and
482 blood pressure increases may be more pronounced in the elderly (see WARNINGS).

483 **ADVERSE REACTIONS**

484 **Serious cardiac events, including some that have been fatal, have occurred following the**
485 **use of IMITREX Injection or Tablets. These events are extremely rare and most have been**
486 **reported in patients with risk factors predictive of CAD. Events reported have included**
487 **coronary artery vasospasm, transient myocardial ischemia, myocardial infarction,**
488 **ventricular tachycardia, and ventricular fibrillation** (see CONTRAINDICATIONS,
489 WARNINGS, and PRECAUTIONS).

490 Significant hypertensive episodes, including hypertensive crises, have been reported on rare
491 occasions in patients with or without a history of hypertension (see WARNINGS).

492 **Incidence in Controlled Clinical Trials:** Table 2 lists adverse events that occurred in
493 placebo-controlled clinical trials in patients who took at least 1 dose of study drug. Only events
494 that occurred at a frequency of 2% or more in any group treated with IMITREX Tablets and
495 were more frequent in that group than in the placebo group are included in Table 2. The events
496 cited reflect experience gained under closely monitored conditions of clinical trials in a highly
497 selected patient population. In actual clinical practice or in other clinical trials, these frequency
498 estimates may not apply, as the conditions of use, reporting behavior, and the kinds of patients
499 treated may differ.

501 **Table 2. Treatment-Emergent Adverse Events Reported by at Least 2% of Patients in**
502 **Controlled Migraine Trials***

Adverse Event Type	Percent of Patients Reporting			
	Placebo (N = 309)	IMITREX 25 mg (N = 417)	IMITREX 50 mg (N = 771)	IMITREX 100 mg (N = 437)
Atypical sensations	4%	5%	6%	6%
Paresthesia (all types)	2%	3%	5%	3%
Sensation warm/cold	2%	3%	2%	3%
Pain and other pressure sensations	4%	6%	6%	8%
Chest - pain/tightness/pressure and/or heaviness	1%	1%	2%	2%
Neck/throat/jaw - pain/ tightness/pressure	<1%	<1%	2%	3%
Pain - location specified	1%	2%	1%	1%
Other - pressure/tightness/ heaviness	2%	1%	1%	3%
Neurological				
Vertigo	<1%	<1%	<1%	2%
Other				
Malaise/fatigue	<1%	2%	2%	3%

503 * Events that occurred at a frequency of 2% or more in the group treated with IMITREX
504 Tablets and that occurred more frequently in that group than the placebo group.

505
506 Other events that occurred in more than 1% of patients receiving IMITREX Tablets and at
507 least as often on placebo included nausea and/or vomiting, migraine, headache, hyposalivation,
508 dizziness, and drowsiness/sleepiness.

509 IMITREX Tablets are generally well tolerated. Across all doses, most adverse reactions were
510 mild and transient and did not lead to long-lasting effects. The incidence of adverse events in
511 controlled clinical trials was not affected by gender or age of the patients. There were insufficient
512 data to assess the impact of race on the incidence of adverse events.

513 **Other Events Observed in Association With the Administration of IMITREX**
514 **Tablets:** In the paragraphs that follow, the frequencies of less commonly reported adverse
515 clinical events are presented. Because the reports include events observed in open and
516 uncontrolled studies, the role of IMITREX Tablets in their causation cannot be reliably
517 determined. Furthermore, variability associated with adverse event reporting, the terminology
518 used to describe adverse events, etc., limit the value of quantitative frequency estimates
519 provided. Event frequencies are calculated as the number of patients who used IMITREX Tablets
520 (25, 50, or 100 mg) and reported an event divided by the total number of patients (N = 6,348)
521 exposed to IMITREX Tablets. All reported events are included except those already listed in the
522 previous table, those too general to be informative, and those not reasonably associated with the
523 use of the drug. Events are further classified within body system categories and enumerated in
524 order of decreasing frequency using the following definitions: frequent adverse events are
525 defined as those occurring in at least 1/100 patients, infrequent adverse events are those
526 occurring in 1/100 to 1/1,000 patients, and rare adverse events are those occurring in fewer than
527 1/1,000 patients.

528 **Atypical Sensations:** Frequent were burning sensation and numbness. Infrequent was tight
529 feeling in head. Rare were dysesthesia.

530 **Cardiovascular:** Frequent were palpitations, syncope, decreased blood pressure, and
531 increased blood pressure. Infrequent were arrhythmia, changes in ECG, hypertension,
532 hypotension, pallor, pulsating sensations, and tachycardia. Rare were angina, atherosclerosis,
533 bradycardia, cerebral ischemia, cerebrovascular lesion, heart block, peripheral cyanosis,
534 thrombosis, transient myocardial ischemia, and vasodilation.

535 **Ear, Nose, and Throat:** Frequent were sinusitis, tinnitus; allergic rhinitis; upper respiratory
536 inflammation; ear, nose, and throat hemorrhage; external otitis; hearing loss; nasal inflammation;
537 and sensitivity to noise. Infrequent were hearing disturbances and otalgia. Rare was feeling of
538 fullness in the ear(s).

539 **Endocrine and Metabolic:** Infrequent was thirst. Rare were elevated thyrotropin
540 stimulating hormone (TSH) levels; galactorrhea; hyperglycemia; hypoglycemia; hypothyroidism;
541 polydipsia; weight gain; weight loss; endocrine cysts, lumps, and masses; and fluid disturbances.

542 **Eye:** Rare were disorders of sclera, mydriasis, blindness and low vision, visual disturbances,
543 eye edema and swelling, eye irritation and itching, accommodation disorders, external ocular
544 muscle disorders, eye hemorrhage, eye pain, and keratitis and conjunctivitis.

545 **Gastrointestinal:** Frequent were diarrhea and gastric symptoms. Infrequent were
546 constipation, dysphagia, and gastroesophageal reflux. Rare were gastrointestinal bleeding,
547 hematemesis, melena, peptic ulcer, gastrointestinal pain, dyspeptic symptoms, dental pain,
548 feelings of gastrointestinal pressure, gastroesophageal reflux, gastritis, gastroenteritis,
549 hypersalivation, abdominal distention, oral itching and irritation, salivary gland swelling, and
550 swallowing disorders.

551 **Hematological Disorders:** Rare was anemia.

552 **Musculoskeletal:** Frequent was myalgia. Infrequent was muscle cramps. Rare were tetany;
553 muscle atrophy, weakness, and tiredness; arthralgia and articular rheumatitis; acquired
554 musculoskeletal deformity; muscle stiffness, tightness, and rigidity; and musculoskeletal
555 inflammation.

556 **Neurological:** Frequent were phonophobia and photophobia. Infrequent were confusion,
557 depression, difficulty concentrating, disturbance of smell, dysarthria, euphoria, facial pain, heat
558 sensitivity, incoordination, lacrimation, monoplegia, sleep disturbance, shivering, syncope, and
559 tremor. Rare were aggressiveness, apathy, bradylogia, cluster headache, convulsions, decreased
560 appetite, drug abuse, dystonic reaction, facial paralysis, hallucinations, hunger, hyperesthesia,
561 hysteria, increased alertness, memory disturbance, neuralgia, paralysis, personality change,
562 phobia, radiculopathy, rigidity, suicide, twitching, agitation, anxiety, depressive disorders,
563 detachment, motor dysfunction, neurotic disorders, psychomotor disorders, taste disturbances,
564 and raised intracranial pressure.

565 **Respiratory:** Frequent was dyspnea. Infrequent was asthma. Rare were hiccoughs, breathing
566 disorders, cough, and bronchitis.

567 **Skin:** Frequent was sweating. Infrequent were erythema, pruritus, rash, and skin tenderness.
568 Rare were dry/scaly skin, tightness of skin, wrinkling of skin, eczema, seborrheic dermatitis, and
569 skin nodules.

570 **Breasts:** Infrequent was tenderness. Rare were nipple discharge; breast swelling; cysts,
571 lumps, and masses of breasts; and primary malignant breast neoplasm.

572 **Urogenital:** Infrequent were dysmenorrhea, increased urination, and intermenstrual
573 bleeding. Rare were abortion and hematuria, urinary frequency, bladder inflammation,
574 micturition disorders, urethritis, urinary infections, menstruation symptoms, abnormal menstrual
575 cycle, inflammation of fallopian tubes, and menstrual cycle symptoms.

576 **Miscellaneous:** Frequent was hypersensitivity. Infrequent were fever, fluid retention, and
577 overdose. Rare were edema, hematoma, lymphadenopathy, speech disturbance, voice
578 disturbances, contusions.

579 **Other Events Observed in the Clinical Development of IMITREX:** The following
580 adverse events occurred in clinical trials with IMITREX Injection and IMITREX Nasal Spray.
581 Because the reports include events observed in open and uncontrolled studies, the role of
582 IMITREX in their causation cannot be reliably determined. All reported events are included
583 except those already listed, those too general to be informative, and those not reasonably
584 associated with the use of the drug.

585 **Atypical Sensations:** Feeling strange, prickling sensation, tingling, and hot sensation.

586 **Cardiovascular:** Abdominal aortic aneurysm, abnormal pulse, flushing, phlebitis, Raynaud
587 syndrome, and various transient ECG changes (nonspecific ST or T wave changes, prolongation
588 of PR or QTc intervals, sinus arrhythmia, nonsustained ventricular premature beats, isolated
589 junctional ectopic beats, atrial ectopic beats, delayed activation of the right ventricle).

590 **Chest Symptoms:** Chest discomfort.

591 **Endocrine and Metabolic:** Dehydration.

592 **Ear, Nose, and Throat:** Disorder/discomfort nasal cavity and sinuses, ear infection,
593 Meniere disease, and throat discomfort.

594 **Eye:** Vision alterations.

595 **Gastrointestinal:** Abdominal discomfort, colitis, disturbance of liver function tests,
596 flatulence/eructation, gallstones, intestinal obstruction, pancreatitis, and retching.

597 **Injection Site Reaction**

598 **Miscellaneous:** Difficulty in walking, hypersensitivity to various agents, jaw discomfort,
599 miscellaneous laboratory abnormalities, “serotonin agonist effect,” swelling of the extremities,
600 and swelling of the face.

601 **Mouth and Teeth:** Disorder of mouth and tongue (e.g., burning of tongue, numbness of
602 tongue, dry mouth).

603 **Musculoskeletal:** Arthritis, backache, intervertebral disc disorder, neck pain/stiffness, need
604 to flex calf muscles, and various joint disturbances (pain, stiffness, swelling, ache).

605 **Neurological:** Bad/unusual taste, chills, diplegia, disturbance of emotions, sedation, globus
606 hystericus, intoxication, myoclonia, neoplasm of pituitary, relaxation, sensation of lightness,
607 simultaneous hot and cold sensations, stinging sensations, stress, tickling sensations, transient
608 hemiplegia, and yawning.

609 **Respiratory:** Influenza and diseases of the lower respiratory tract and lower respiratory tract
610 infection.

611 **Skin:** Skin eruption, herpes, and peeling of the skin.

612 **Urogenital:** Disorder of breasts, endometriosis, and renal calculus.

613 **Postmarketing Experience (Reports for Subcutaneous or Oral Sumatriptan):** The
614 following section enumerates potentially important adverse events that have occurred in clinical
615 practice and that have been reported spontaneously to various surveillance systems. The events
616 enumerated represent reports arising from both domestic and nondomestic use of oral or
617 subcutaneous dosage forms of sumatriptan. The events enumerated include all except those
618 already listed in the ADVERSE REACTIONS section above or those too general to be
619 informative. Because the reports cite events reported spontaneously from worldwide
620 postmarketing experience, frequency of events and the role of sumatriptan in their causation
621 cannot be reliably determined. It is assumed, however, that systemic reactions following
622 sumatriptan use are likely to be similar regardless of route of administration.

623 **Blood:** Hemolytic anemia, pancytopenia, thrombocytopenia.

624 **Cardiovascular:** Atrial fibrillation, cardiomyopathy, colonic ischemia (see WARNINGS),
625 Prinzmetal variant angina, pulmonary embolism, shock, thrombophlebitis.

626 **Ear, Nose, and Throat:** Deafness.

627 **Eye:** Ischemic optic neuropathy, retinal artery occlusion, retinal vein thrombosis, loss of
628 vision.

629 **Gastrointestinal:** Ischemic colitis with rectal bleeding (see WARNINGS), xerostomia.

630 **Hepatic:** Elevated liver function tests.

631 **Neurological:** Central nervous system vasculitis, cerebrovascular accident, dysphasia,
632 serotonin syndrome, subarachnoid hemorrhage.

633 **Non-Site Specific:** Angioneurotic edema, cyanosis, death (see WARNINGS), temporal
634 arteritis.

635 **Psychiatry:** Panic disorder.

636 **Respiratory:** Bronchospasm in patients with and without a history of asthma.

637 **Skin:** Exacerbation of sunburn, hypersensitivity reactions (allergic vasculitis, erythema,
638 pruritus, rash, shortness of breath, urticaria; in addition, severe anaphylaxis/anaphylactoid
639 reactions have been reported [see WARNINGS]), photosensitivity.

640 **Urogenital:** Acute renal failure.

641 **DRUG ABUSE AND DEPENDENCE**

642 One clinical study with IMITREX[®] (sumatriptan succinate) Injection enrolling 12 patients
643 with a history of substance abuse failed to induce subjective behavior and/or physiologic
644 response ordinarily associated with drugs that have an established potential for abuse.

645 **OVERDOSAGE**

646 Patients (N = 670) have received single oral doses of 140 to 300 mg without significant
647 adverse effects. Volunteers (N = 174) have received single oral doses of 140 to 400 mg without
648 serious adverse events.

649 Overdose in animals has been fatal and has been heralded by convulsions, tremor, paralysis,
650 inactivity, ptosis, erythema of the extremities, abnormal respiration, cyanosis, ataxia, mydriasis,
651 salivation, and lacrimation. The elimination half-life of sumatriptan is approximately 2.5 hours
652 (see CLINICAL PHARMACOLOGY), and therefore monitoring of patients after overdose with
653 IMITREX Tablets should continue for at least 12 hours or while symptoms or signs persist.

654 It is unknown what effect hemodialysis or peritoneal dialysis has on the serum concentrations
655 of sumatriptan.

656 **DOSAGE AND ADMINISTRATION**

657 In controlled clinical trials, single doses of 25, 50, or 100 mg of IMITREX Tablets were
658 effective for the acute treatment of migraine in adults. There is evidence that doses of 50 and
659 100 mg may provide a greater effect than 25 mg (see CLINICAL TRIALS). There is also
660 evidence that doses of 100 mg do not provide a greater effect than 50 mg. Individuals may vary
661 in response to doses of IMITREX Tablets. The choice of dose should therefore be made on an
662 individual basis, weighing the possible benefit of a higher dose with the potential for a greater
663 risk of adverse events.

664 If the headache returns or the patient has a partial response to the initial dose, the dose may be
665 repeated after 2 hours, not to exceed a total daily dose of 200 mg. If a headache returns following
666 an initial treatment with IMITREX Injection, additional single IMITREX Tablets (up to
667 100 mg/day) may be given with an interval of at least 2 hours between tablet doses. The safety of
668 treating an average of more than 4 headaches in a 30-day period has not been established.

669 Because of the potential of MAO-A inhibitors to cause unpredictable elevations in the
670 bioavailability of oral sumatriptan, their combined use is contraindicated (see
671 CONTRAINDICATIONS).

672 Hepatic disease/functional impairment may also cause unpredictable elevations in the
673 bioavailability of orally administered sumatriptan. Consequently, if treatment is deemed
674 advisable in the presence of liver disease, the maximum single dose should in general not exceed
675 50 mg (see CLINICAL PHARMACOLOGY for the basis of this recommendation).

676 HOW SUPPLIED

677 IMITREX Tablets, 25, 50, and 100 mg of sumatriptan (base) as the succinate.

678 IMITREX Tablets, 25 mg are white, triangular-shaped, film-coated tablets debossed with “I”
679 on one side and “25” on the other in blister packs of 9 tablets (NDC 0173-0735-00).

680 IMITREX Tablets, 50 mg are white, triangular-shaped, film-coated tablets debossed with
681 “IMITREX 50” on one side and a chevron shape (^) on the other in blister packs of 9 tablets
682 (NDC 0173-0736-01).

683 IMITREX Tablets, 100 mg, are pink, triangular-shaped, film-coated tablets debossed with
684 “IMITREX 100” on one side and a chevron shape (^) on the other in blister packs of 9 tablets
685 (NDC 0173-0737-01).

686 **Store between 36° and 86°F (2° and 30°C).**

687 ANIMAL TOXICOLOGY

688 **Corneal Opacities:** Dogs receiving oral sumatriptan developed corneal opacities and defects
689 in the corneal epithelium. Corneal opacities were seen at the lowest dosage tested, 2 mg/kg/day,
690 and were present after 1 month of treatment. Defects in the corneal epithelium were noted in a
691 60-week study. Earlier examinations for these toxicities were not conducted and no-effect doses
692 were not established; however, the relative exposure at the lowest dose tested was approximately
693 5 times the human exposure after a 100-mg oral dose. There is evidence of alterations in corneal
694 appearance on the first day of intranasal dosing to dogs. Changes were noted at the lowest dose
695 tested, which was approximately one half the maximum single human oral dose of 100 mg on a
696 mg/m² basis.

697 PATIENT INFORMATION

698 The following wording is contained in a separate leaflet provided for patients.

699

700

Information for the Patient

701

IMITREX^{®*} (sumatriptan succinate) Tablets

702

703 Please read this leaflet carefully before you take IMITREX Tablets. This provides a summary of
704 the information available on your medicine. Please do not throw away this leaflet until you have
705 finished your medicine. You may need to read this leaflet again. This leaflet does not contain all

706 the information on IMITREX Tablets. For further information or advice, ask your doctor or
707 pharmacist.

708 **Information About Your Medicine:**

709 The name of your medicine is IMITREX (sumatriptan succinate) Tablets. It can be obtained
710 only by prescription from your doctor. The decision to use IMITREX Tablets is one that you and
711 your doctor should make jointly, taking into account your individual preferences and medical
712 circumstances. If you have risk factors for heart disease (such as high blood pressure, high
713 cholesterol, obesity, diabetes, smoking, strong family history of heart disease, or you are
714 postmenopausal or a male over 40 years of age), you should tell your doctor, who should
715 evaluate you for heart disease in order to determine if IMITREX is appropriate for you. Although
716 the vast majority of those who have taken IMITREX have not experienced any significant side
717 effects, some individuals have experienced serious heart problems and, rarely, considering the
718 extensiveness of IMITREX use worldwide, deaths have been reported. In all but a few instances,
719 however, serious problems occurred in people with known heart disease and it was not clear
720 whether IMITREX was a contributory factor in these deaths.

721 **1. The Purpose of Your Medicine:**

722 IMITREX Tablets are intended to relieve your migraine, but not to prevent or reduce the
723 number of attacks you experience. Use IMITREX Tablets only to treat an actual migraine attack.

724 **2. Important Questions to Consider Before Taking IMITREX Tablets:**

725 If the answer to any of the following questions is **YES** or if you do not know the answer, then
726 please discuss it with your doctor before you use IMITREX Tablets.

- 727 • Are you pregnant? Do you think you might be pregnant? Are you trying to become pregnant?
728 Are you using inadequate contraception? Are you breastfeeding?
- 729 • Do you have any chest pain, heart disease, shortness of breath, or irregular heartbeats? Have
730 you had a heart attack?
- 731 • Do you have risk factors for heart disease (such as high blood pressure, high cholesterol,
732 obesity, diabetes, smoking, strong family history of heart disease, or you are postmenopausal
733 or a male over 40 years of age)?
- 734 • Have you had a stroke, transient ischemic attacks (TIAs), or Raynaud syndrome?
- 735 • Do you have high blood pressure?
- 736 • Have you ever had to stop taking this or any other medicine because of an allergy or other
737 problems?
- 738 • Are you taking any other migraine medicines, including other 5-HT₁ agonists or any other
739 medicines containing ergotamine, dihydroergotamine, or methysergide?
- 740 • Are you taking any medicine for depression or other disorders such as monoamine oxidase
741 inhibitors, selective serotonin reuptake inhibitors (SSRIs), or serotonin norepinephrine
742 reuptake inhibitors (SNRIs)? Common SSRIs are citalopram HBr (CELEXA[®]), escitalopram
743 oxalate (LEXAPRO[®]), paroxetine (PAXIL[®]), fluoxetine (PROZAC[®]/SARAFEM[®]),
744 olanzapine/fluoxetine (SYMBYAX[®]), sertraline (ZOLOFT[®]), and fluvoxamine. Common
745 SNRIs are duloxetine (CYMBALTA[®]) and venlafaxine (EFFEXOR[®]).

- 746 • Have you had, or do you have, any disease of the liver or kidney?
747 • Have you had, or do you have, epilepsy or seizures?
748 • Is this headache different from your usual migraine attacks?

749 Remember, if you answered **YES** to any of the above questions, then discuss it with your
750 doctor.

751 **3. *The Use of IMITREX Tablets During Pregnancy:***

752 Do not use IMITREX Tablets if you are pregnant, think you might be pregnant, are trying to
753 become pregnant, or are not using adequate contraception, unless you have discussed this with
754 your doctor.

755 **4. *How to Use IMITREX Tablets:***

756 For adults, the usual dose is a single tablet swallowed whole with water or other fluids. Do not
757 split tablets.

758 A second tablet may be taken if your symptoms of migraine come back or if you have a
759 partial response to the initial dose, but not sooner than 2 hours following the first tablet. For a
760 given attack, if you have no response to the first tablet, do not take a second tablet without first
761 consulting with your doctor. Do not take more than a total of 200 mg of IMITREX Tablets in
762 any 24-hour period. The safety of treating an average of more than 4 headaches in a 30-day
763 period has not been established.

764 **5. *Side Effects to Watch for:***

- 765 • Some patients experience pain or tightness in the chest or throat when using IMITREX
766 Tablets. If this happens to you, then discuss it with your doctor before using any more
767 IMITREX Tablets. If the chest pain is severe or does not go away, call your doctor
768 immediately.
- 769 • If you have sudden and/or severe abdominal pain following IMITREX Tablets, call your
770 doctor immediately.
- 771 • Some people may have a reaction called serotonin syndrome when they use certain types of
772 antidepressants, SSRIs or SNRIs, while taking IMITREX Tablets. Symptoms may include
773 confusion, hallucinations, fast heartbeat, feeling faint, fever, sweating, muscle spasm,
774 difficulty walking, and/or diarrhea. Call your doctor immediately if you have any of these
775 symptoms after taking IMITREX Tablets.
- 776 • Shortness of breath; wheeziness; heart throbbing; swelling of eyelids, face, or lips; or a skin
777 rash, skin lumps, or hives happens rarely. If it happens to you, then tell your doctor
778 immediately. Do not take any more IMITREX Tablets unless your doctor tells you to do so.
- 779 • Some people may have feelings of tingling, heat, flushing (redness of face lasting a short
780 time), heaviness or pressure after treatment with IMITREX Tablets. A few people may feel
781 drowsy, dizzy, tired, or sick. Tell your doctor of these symptoms at your next visit.
- 782 • If you feel unwell in any other way or have any symptoms that you do not understand, you
783 should contact your doctor immediately.

784 **6. *What to Do if an Overdose is Taken:***

785 If you have taken more medicine than you have been told, contact either your doctor, hospital
786 emergency department, or nearest poison control center immediately.

787 **7. Storing Your Medicine:**

788 Keep your medicine in a safe place where children cannot reach it. It may be harmful to
789 children. Do not remove tablets from the packaging until you are ready to use them. Do not store
790 the tablets in any other container.

791 Store your medicine away from heat and light. Do not store at temperatures above 86°F
792 (30°C), or below 36°F (2°C).

793 If your medicine has expired (the expiration date is printed on the treatment pack), throw it
794 away as instructed. If your doctor decides to stop your treatment, do not keep any leftover
795 medicine unless your doctor tells you to. Throw away your medicine as instructed.

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798 are trademarks of their respective owners and are not trademarks of GlaxoSmithKline. The
799 makers of these brands are not affiliated with and do not endorse GlaxoSmithKline or its
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