

HIGHLIGHTS OF PRESCRIBING INFORMATION

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

RYTHMOL SR (propafenone hydrochloride) Extended-Release Capsules for oral use

Initial U.S. Approval: 1989

WARNING: MORTALITY

See full prescribing information for complete boxed warning.

- An increased rate of death or reversed cardiac arrest rate was seen in patients treated with encainide or flecainide (Class IC antiarrhythmics) compared with that seen in patients assigned to placebo. At present it is prudent to consider any IC antiarrhythmic to have a significant risk of provoking proarrhythmic events in patients with structural heart disease.
- Given the lack of any evidence that these drugs improve survival, antiarrhythmic agents should generally be avoided in patients with non-life-threatening ventricular arrhythmias, even if the patients are experiencing unpleasant, but not life-threatening, symptoms or signs.

RECENT MAJOR CHANGES

Contraindications (4) 02/2013
Warnings and Precautions, Unmasking Brugada Syndrome (5.2) 02/2013

INDICATIONS AND USAGE

RYTHMOL SR is an antiarrhythmic indicated to prolong the time to recurrence of symptomatic atrial fibrillation (AF) in patients with episodic (most likely paroxysmal or persistent) AF who do not have structural heart disease. (1)

Usage Considerations:

- Use in patients with permanent atrial fibrillation or with atrial flutter or PSVT has not been evaluated. Do not use to control ventricular rate during atrial fibrillation. (1)
- In patients with atrial fibrillation and atrial flutter, use RYTHMOL SR with drugs that increase the atrioventricular nodal refractory period. (1)
- The effect of propafenone on mortality has not been determined. (1)

DOSAGE AND ADMINISTRATION

- Initiate therapy with 225 mg given every 12 hours. (2)
- Dosage may be increased at a minimum of 5 day intervals to 325 mg every 12 hours and, if necessary, to 425 mg every 12 hours. (2)
- Dose reduction should be considered in patients with hepatic impairment, significant widening of the QRS complex, or second or third degree AV block. (2)

DOSAGE FORMS AND STRENGTHS

Capsules: 225 mg, 325 mg, 425 mg. (3)

CONTRAINDICATIONS

- Heart failure (4)
- Cardiogenic shock (4)
- Sinoatrial, atrioventricular, and intraventricular disorders of impulse generation and/or conduction in the absence of pacemaker (4)
- Known Brugada Syndrome (4)
- Bradycardia (4)

- Marked hypotension (4)
- Bronchospastic disorders and severe obstructive pulmonary disease (4)
- Marked electrolyte imbalance (4)

WARNINGS AND PRECAUTIONS

- May cause new or worsened arrhythmias. Evaluate patients via ECG prior to and during therapy. (5.1)
- RYTHMOL SR may unmask Brugada or Brugada-like Syndrome. Evaluate patients via ECG after initiation of therapy. (4, 5.2)
- Avoid use with other antiarrhythmic agents or drugs that prolong the QT interval. (5.3)
- Avoid simultaneous use of propafenone with both a cytochrome P450 2D6 inhibitor and a 3A4 inhibitor. (5.4)
- May provoke overt heart failure. (5.5)
- May cause dose-related first degree AV block or other conduction disturbances. Should not be given to patients with conduction defects in absence of a pacemaker. (5.6)
- May affect artificial pacemakers. Pacemakers should be monitored during therapy. (5.7)
- Agranulocytosis: Patients should report signs of infection. (5.8)
- Administer cautiously to patients with impaired hepatic and renal function. (5.9, 5.10)
- Exacerbation of myasthenia gravis has been reported. (5.11)

ADVERSE REACTIONS

The most commonly reported adverse events with propafenone (>5% and greater than placebo) excluding those not reasonably associated with the use of the drug included the following: dizziness, palpitations, chest pain, dyspnea, taste disturbance, nausea, fatigue, anxiety, constipation, upper respiratory tract infection, edema, and influenza. (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

- Inhibitors of CYP2D6, 1A2, and 3A4 may increase propafenone levels which may lead to cardiac arrhythmias. Simultaneous use with both a CYP3A4 and CYP2D6 inhibitor (or in patients with CYP2D6 deficiency) should be avoided. (7.1)
- Propafenone may increase digoxin or warfarin levels. (7.2, 7.3)
- Orlistat may reduce propafenone concentrations. Abrupt cessation of orlistat in patients stable on RYTHMOL SR has resulted in convulsions, atrioventricular block, and circulatory failure. (7.4)
- Concomitant use of lidocaine may increase central nervous system side effects. (7.6)

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

Revised: 02/2013

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1 FULL PRESCRIBING INFORMATION

2 **WARNING: MORTALITY**

- 3 • **In the National Heart, Lung and Blood Institute’s Cardiac Arrhythmia Suppression**
4 **Trial (CAST), a long-term, multi-center, randomized, double-blind study in patients**
5 **with asymptomatic non-life-threatening ventricular arrhythmias who had a myocardial**
6 **infarction more than 6 days but less than 2 years previously, an increased rate of death**
7 **or reversed cardiac arrest rate (7.7%; 56/730) was seen in patients treated with**
8 **encainide or flecainide (Class IC antiarrhythmics) compared with that seen in patients**
9 **assigned to placebo (3.0%; 22/725). The average duration of treatment with encainide**
10 **or flecainide in this study was 10 months.**
- 11 • **The applicability of the CAST results to other populations (e.g., those without recent**
12 **myocardial infarction) or other antiarrhythmic drugs is uncertain, but at present, it is**
13 **prudent to consider any IC antiarrhythmic to have a significant proarrhythmic risk in**
14 **patients with structural heart disease. Given the lack of any evidence that these drugs**
15 **improve survival, antiarrhythmic agents should generally be avoided in patients with**
16 **non-life-threatening ventricular arrhythmias, even if the patients are experiencing**
17 **unpleasant, but not life-threatening, symptoms or signs.**

18 **1 INDICATIONS AND USAGE**

19 RYTHMOL SR[®] is indicated to prolong the time to recurrence of symptomatic atrial
20 fibrillation (AF) in patients with episodic (most likely paroxysmal or persistent) AF who do not
21 have structural heart disease.

22 **Usage Considerations:**

- 23 • The use of RYTHMOL SR in patients with permanent AF or in patients exclusively with
24 atrial flutter or paroxysmal supraventricular tachycardia (PSVT) has not been evaluated. Do
25 not use RYTHMOL SR to control ventricular rate during AF.
- 26 • Some patients with atrial flutter treated with propafenone have developed 1:1 conduction,
27 producing an increase in ventricular rate. Concomitant treatment with drugs that increase the
28 functional atrioventricular (AV) nodal refractory period is recommended.
- 29 • The effect of propafenone on mortality has not been determined [*see Boxed Warning*].

30 **2 DOSAGE AND ADMINISTRATION**

31 RYTHMOL SR can be taken with or without food. Do not crush or further divide the
32 contents of the capsule.

33 The dose of RYTHMOL SR must be individually titrated on the basis of response and
34 tolerance. Initiate therapy with RYTHMOL SR 225 mg given every 12 hours. Dosage may be
35 increased at a minimum of 5-day interval to 325 mg given every 12 hours. If additional

36 therapeutic effect is needed, the dose of RYTHMOL SR may be increased to 425 mg given every
37 12 hours.

38 In patients with hepatic impairment or those with significant widening of the QRS
39 complex or second or third degree AV block, consider reducing the dose.

40 The combination of CYP3A4 inhibition and either CYP2D6 deficiency or CYP2D6
41 inhibition with the simultaneous administration of propafenone may significantly increase the
42 concentration of propafenone and thereby increase the risk of proarrhythmia and other adverse
43 events. Therefore, avoid simultaneous use of RYTHMOL SR with both a CYP2D6 inhibitor and
44 a CYP3A4 inhibitor [*see Warnings and Precautions (5.4) and Drug Interactions (7.1)*].

45 **3 DOSAGE FORMS AND STRENGTHS**

46 RYTHMOL SR (propafenone HCl) capsules are supplied as white, opaque, hard gelatin
47 capsules containing either 225 mg, 325 mg, or 425 mg of propafenone HCl. The 225 mg strength
48 is imprinted in red with GS EUG followed by 225. The 325 mg strength is imprinted in red with
49 GS F1Y followed by 325, and also has a single red band around $\frac{3}{4}$ of the circumference of the
50 body. The 425 mg strength is imprinted in red with GS UY2 followed by 425, and also has three
51 red bands around $\frac{3}{4}$ of the circumference of the body.

52 **4 CONTRAINDICATIONS**

53 RYTHMOL SR is contraindicated in the following circumstances:

- 54 • Heart failure
- 55 • Cardiogenic shock
- 56 • Sinoatrial, atrioventricular and intraventricular disorders of impulse generation or conduction
57 (e.g., sick sinus node syndrome, AV block) in the absence of an artificial pacemaker
- 58 • Known Brugada Syndrome
- 59 • Bradycardia
- 60 • Marked hypotension
- 61 • Bronchospastic disorders or severe obstructive pulmonary disease
- 62 • Marked electrolyte imbalance

63 **5 WARNINGS AND PRECAUTIONS**

64 **5.1 Proarrhythmic Effects**

65 Propafenone has caused new or worsened arrhythmias. Such proarrhythmic effects
66 include sudden death and life-threatening ventricular arrhythmias such as ventricular fibrillation,
67 ventricular tachycardia, asystole and torsade de pointes. It may also worsen premature
68 ventricular contractions or supraventricular arrhythmias, and it may prolong the QT interval. It is
69 therefore essential that each patient given RYTHMOL SR be evaluated electrocardiographically
70 prior to and during therapy, to determine whether the response to RYTHMOL SR supports
71 continued treatment. Because propafenone prolongs the QRS interval in the electrocardiogram,
72 changes in the QT interval are difficult to interpret [*see Clinical Pharmacology (12.2)*].

73 In the RAFT study [see *Clinical Studies (14)*], there were too few deaths to assess the
74 long term risk to patients. There were 5 deaths, 3 in the pooled RYTHMOL SR group (0.8%) and
75 2 in the placebo group (1.6%). In the overall RYTHMOL SR and RYTHMOL immediate-release
76 database of 8 studies, the mortality rate was 2.5% per year on propafenone and 4.0% per year on
77 placebo. Concurrent use of propafenone with other antiarrhythmic agents has not been well
78 studied.

79 In a U.S. uncontrolled, open label multicenter trial using the immediate-release
80 formulation in patients with symptomatic supraventricular tachycardia (SVT), 1.9% (9/474) of
81 these patients experienced ventricular tachycardia (VT) or ventricular fibrillation (VF) during the
82 study. However, in 4 of the 9 patients, the ventricular tachycardia was of atrial origin. Six of the
83 9 patients that developed ventricular arrhythmias did so within 14 days of onset of therapy.
84 About 2.3% (11/474) of all patients had recurrence of SVT during the study which could have
85 been a change in the patients' arrhythmia behavior or could represent a proarrhythmic event.
86 Case reports in patients treated with propafenone for atrial fibrillation/flutter have included
87 increased premature ventricular contractions (PVCs), VT, VF, torsades de pointes, asystole, and
88 death.

89 Overall in clinical trials with RYTHMOL immediate-release (which included patients
90 treated for ventricular arrhythmias, atrial fibrillation/flutter, and PSVT), 4.7% of all patients had
91 new or worsened ventricular arrhythmia possibly representing a proarrhythmic event (0.7% was
92 an increase in PVCs; 4.0% a worsening, or new appearance, of VT or VF). Of the patients who
93 had worsening of VT (4%), 92% had a history of VT and/or VT/VF, 71% had coronary artery
94 disease, and 68% had a prior myocardial infarction. The incidence of proarrhythmia in patients
95 with less serious or benign arrhythmias, which include patients with an increase in frequency of
96 PVCs, was 1.6%. Although most proarrhythmic events occurred during the first week of therapy,
97 late events also were seen and the CAST study [see *Boxed Warning: Mortality*] suggests that an
98 increased risk of proarrhythmia is present throughout treatment.

99 **5.2 Unmasking Brugada Syndrome**

100 Brugada Syndrome may be unmasked after exposure to RYTHMOL SR. Perform an
101 ECG after initiation of RYTHMOL SR and discontinue the drug if changes are suggestive of
102 Brugada Syndrome [see *Contraindications (4)*].

103 **5.3 Use with Drugs that Prolong the QT Interval and Antiarrhythmic Agents**

104 The use of RYTHMOL SR in conjunction with other drugs that prolong the QT interval
105 has not been extensively studied. Such drugs may include many antiarrhythmics, some
106 phenothiazines, tricyclic antidepressants, and oral macrolides. Withhold Class IA and III
107 antiarrhythmic agents for at least 5 half-lives prior to dosing with RYTHMOL SR. Avoid the use
108 of propafenone with Class IA and III antiarrhythmic agents (including quinidine and
109 amiodarone). There is only limited experience with the concomitant use of Class IB or IC
110 antiarrhythmics.

111 **5.4 Drug Interactions: Simultaneous Use with Inhibitors of Cytochrome P450**
112 **Isoenzymes 2D6 and 3A4**

113 Propafenone is metabolized by CYP2D6, CYP3A4, and CYP1A2 isoenzymes.
114 Approximately 6% of Caucasians in the U.S. population are naturally deficient in CYP2D6
115 activity and to a somewhat lesser extent in other demographic groups. Drugs that inhibit these
116 CYP pathways (such as desipramine, paroxetine, ritonavir, sertraline for CYP2D6; ketoconazole,
117 erythromycin, saquinavir, and grapefruit juice for CYP3A4; and amiodarone and tobacco smoke
118 for CYP1A2) can be expected to cause increased plasma levels of propafenone.

119 Increased exposure to propafenone may lead to cardiac arrhythmias and exaggerated
120 beta-adrenergic blocking activity. Because of its metabolism, the combination of CYP3A4
121 inhibition and either CYP2D6 deficiency or CYP2D6 inhibition in users of propafenone is
122 potentially hazardous. Therefore, avoid simultaneous use of RYTHMOL SR with both a
123 CYP2D6 inhibitor and a CYP3A4 inhibitor.

124 **5.5 Use in Patients with a History of Heart Failure**

125 Propafenone exerts a negative inotropic activity on the myocardium as well as beta
126 blockade effects and may provoke overt heart failure. In the U.S. trial (RAFT) in patients with
127 symptomatic AF, heart failure was reported in 4 (1.0%) patients receiving RYTHMOL SR (all
128 doses), compared to 1 (0.8%) patient receiving placebo. Proarrhythmic effects more likely occur
129 when propafenone is administered to patients with heart failure (NYHA III and IV) or severe
130 myocardial ischemia [*see Contraindications (4)*].

131 In clinical trial experience with RYTHMOL immediate-release, new or worsened heart
132 failure has been reported in 3.7% of patients with ventricular arrhythmia. These events were
133 more likely in subjects with preexisting heart failure and coronary artery disease. New onset of
134 heart failure attributable to propafenone developed in <0.2% of patients with ventricular
135 arrhythmia and in 1.9% of patients with paroxysmal AF or PSVT.

136 **5.6 Conduction Disturbances**

137 Propafenone slows atrioventricular conduction and may also cause dose-related first
138 degree AV block. Average PR interval prolongation and increases in QRS duration are also
139 dose-related. Do not give propafenone to patients with atrioventricular and intraventricular
140 conduction defects in the absence of a pacemaker [*see Contraindications (4) and Clinical*
141 *Pharmacology (12.2)*].

142 In a U.S. trial (RAFT) in 523 patients with a history of symptomatic AF treated with
143 RYTHMOL SR, sinus bradycardia (rate <50 beats/min) was reported with the same frequency
144 with RYTHMOL SR and placebo.

145 **5.7 Effects on Pacemaker Threshold**

146 Propafenone may alter both pacing and sensing thresholds of implanted pacemakers and
147 defibrillators. During and after therapy, monitor and re-program these devices accordingly.

148 **5.8 Agranulocytosis**

149 Agranulocytosis has been reported in patients receiving propafenone. Generally, the
150 agranulocytosis occurred within the first 2 months of propafenone therapy and upon

151 discontinuation of therapy, the white count usually normalized by 14 days. Unexplained fever or
152 decrease in white cell count, particularly during the initial 3 months of therapy, warrant
153 consideration of possible agranulocytosis or granulocytopenia. Instruct patients to report
154 promptly any signs of infection such as fever, sore throat, or chills.

155 **5.9 Use in Patients with Hepatic Dysfunction**

156 Propafenone is highly metabolized by the liver. Severe liver dysfunction increases the
157 bioavailability of propafenone to approximately 70% compared to 3 to 40% in patients with
158 normal liver function when given RYTHMOL immediate-release tablets. In 8 patients with
159 moderate to severe liver disease administered RYTHMOL immediate-release tablets, the mean
160 half-life was approximately 9 hours. No studies have compared bioavailability of propafenone
161 from RYTHMOL SR in patients with normal and impaired hepatic function. Increased
162 bioavailability of propafenone in these patients may result in excessive accumulation. Carefully
163 monitor patients with impaired hepatic function for excessive pharmacological effects [*see*
164 *Overdosage (10)*].

165 **5.10 Use in Patients with Renal Dysfunction**

166 Approximately 50% of propafenone metabolites are excreted in the urine following
167 administration of RYTHMOL immediate-release tablets. No studies have been performed to
168 assess the percentage of metabolites eliminated in the urine following the administration of
169 RYTHMOL SR capsules.

170 In patients with impaired renal function monitor for signs of overdosage [*see*
171 *Overdosage (10)*].

172 **5.11 Use in Patients with Myasthenia Gravis**

173 Exacerbation of myasthenia gravis has been reported during propafenone therapy.

174 **5.12 Elevated ANA Titers**

175 Positive ANA titers have been reported in patients receiving propafenone. They have
176 been reversible upon cessation of treatment and may disappear even in the face of continued
177 propafenone therapy. These laboratory findings were usually not associated with clinical
178 symptoms, but there is one published case of drug-induced lupus erythematosus (positive
179 rechallenge); it resolved completely upon discontinuation of therapy. Carefully evaluate patients
180 who develop an abnormal ANA test and if persistent or worsening elevation of ANA titers is
181 detected, consider discontinuing therapy.

182 **5.13 Impaired Spermatogenesis**

183 Reversible disorders of spermatogenesis have been demonstrated in monkeys, dogs and
184 rabbits after high dose intravenous administration of propafenone. Evaluation of the effects of
185 short-term RYTHMOL administration on spermatogenesis in 11 normal subjects suggested that
186 propafenone produced a reversible, short-term drop (within normal range) in sperm count.

187 **6 ADVERSE REACTIONS**

188 **6.1 Clinical Trials Experience**

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

192 The data described below reflect exposure to RYTHMOL SR 225 mg twice daily in 126
193 patients, to RYTHMOL SR 325 mg twice daily in 135 patients, to RYTHMOL SR 425 mg twice
194 daily in 136 patients, and to placebo in 126 patients for up to 39 weeks (mean 20 weeks) in a
195 placebo-controlled trial (RAFT) conducted in the US. The most commonly reported adverse
196 events with propafenone (>5% and greater than placebo) excluding those not reasonably
197 associated with the use of the drug or because they were associated with the condition being
198 treated, were dizziness, palpitations, chest pain, dyspnea, taste disturbance, nausea, fatigue,
199 anxiety, constipation, upper respiratory tract infection, edema, and influenza. The frequency of
200 discontinuation due to adverse events was 17%, and the rate was highest during the first 14 days
201 of treatment.

202 Cardiac-related adverse events occurring in $\geq 2\%$ of the patients in any of the RAFT
203 propafenone SR treatment groups and more common with propafenone than with placebo,
204 excluding those that are common in the population and those not plausibly related to drug
205 therapy, included the following: angina pectoris, atrial flutter, AV block first degree,
206 bradycardia, congestive cardiac failure, cardiac murmur, edema, dyspnea, rales, wheezing, and
207 cardioactive drug level above therapeutic.

208 Propafenone prolongs the PR and QRS intervals in patients with atrial and ventricular
209 arrhythmias. Prolongation of the QRS interval makes it difficult to interpret the effect of
210 propafenone on the QT interval [*see Clinical Pharmacology (12.2)*].

211 Non-cardiac related adverse events occurring in $\geq 2\%$ of the patients in any of the RAFT
212 propafenone SR treatment groups and more common with propafenone than with placebo,
213 excluding those that are common in the population and those not plausibly related to drug
214 therapy, included the following: blurred vision, constipation, diarrhea, dry mouth, flatulence,
215 nausea, vomiting, fatigue, weakness, upper respiratory tract infection, blood alkaline phosphatase
216 increased, hematuria, muscle weakness, dizziness (excluding vertigo), headache, taste
217 disturbance, tremor, somnolence, anxiety, depression, ecchymosis.

218 No clinically important differences in incidence of adverse reactions were noted by age
219 or gender. Too few non-Caucasian patients were enrolled to assess adverse events according to
220 race.

221 Adverse events occurring in 2% or more of the patients in any of the ERAFT [*see*
222 *Clinical Studies (14)*] propafenone SR treatment groups and not listed above include the
223 following: bundle branch block left, bundle branch block right, conduction disorders, sinus
224 bradycardia, and hypotension.

225 Other adverse events reported with propafenone clinical trials not already listed
226 elsewhere in the prescribing information include the following adverse events by body and
227 preferred term.

228 Blood and Lymphatic System Disorders: Anemia, lymphadenopathy, spleen disorder,
229 thrombocytopenia.

230 Cardiac Disorders: Unstable angina, atrial hypertrophy, cardiac arrest, coronary artery
231 disease, extrasystoles, myocardial infarction, nodal arrhythmia, palpitations, pericarditis,
232 sinoatrial block, sinus arrest, sinus arrhythmia, supraventricular extrasystoles, ventricular
233 extrasystoles, ventricular hypertrophy.

234 Ear and Labyrinth Disorders: Hearing impaired, tinnitus, vertigo.

235 Eye Disorders: Eye hemorrhage, eye inflammation, eyelid ptosis, miosis, retinal
236 disorder, visual acuity reduced.

237 Gastrointestinal Disorders: Abdominal distension, abdominal pain, duodenitis,
238 dyspepsia, dysphagia, eructation, gastritis, gastroesophageal reflux disease, gingival bleeding,
239 glossitis, glossodynia, gum pain, halitosis, intestinal obstruction, melena, mouth ulceration,
240 pancreatitis, peptic ulcer, rectal bleeding, sore throat.

241 General Disorders and Administration Site Conditions: Chest pain, feeling hot,
242 hemorrhage, malaise, pain, pyrexia.

243 Hepatobiliary Disorders: Hepatomegaly.

244 Investigations: Abnormal heart sounds, abnormal pulse, carotid bruit, decreased blood
245 chloride, decreased blood pressure, decreased blood sodium, decreased hemoglobin, decreased
246 neutrophil count, decreased platelet count, decreased prothrombin level, decreased red blood cell
247 count, decreased weight, glycosuria present, increased alanine aminotransferase, increased
248 aspartate aminotransferase, increased blood bilirubin, increased blood cholesterol, increased
249 blood creatinine, increased blood glucose, increased blood lactate dehydrogenase, increased
250 blood pressure, increased blood prolactin, increased blood triglycerides, increased blood urea,
251 increased blood uric acid, increased eosinophil count, increased gamma-glutamyltransferase,
252 increased monocyte count, increased prostatic specific antigen, increased prothrombin level,
253 increased weight, increased white blood cell count, ketonuria present, proteinuria present.

254 Metabolism and Nutrition Disorders: Anorexia, dehydration, diabetes mellitus, gout,
255 hypercholesterolemia, hyperglycemia, hyperlipidemia, hypokalemia.

256 Musculoskeletal, Connective Tissue and Bone Disorders: Arthritis, bursitis,
257 collagen-vascular disease, costochondritis, joint disorder, muscle cramps, muscle spasms,
258 myalgia, neck pain, pain in jaw, sciatica, tendonitis.

259 Nervous System Disorders: Amnesia, ataxia, balance impaired, brain damage,
260 cerebrovascular accident, dementia, gait abnormal, hypertonia, hypothesia, insomnia, paralysis,
261 paresthesia, peripheral neuropathy, speech disorder, syncope, tongue hypoesthesia.

262 Psychiatric Disorders: Decreased libido, emotional disturbance, mental disorder,
263 neurosis, nightmare, sleep disorder.

264 Renal and Urinary Disorders: Dysuria, nocturia, oliguria, pyuria, renal failure, urinary
265 casts, urinary frequency, urinary incontinence, urinary retention, urine abnormal.

266 Reproductive System and Breast Disorders: Breast pain, impotence, prostatism.

267 Respiratory, Thoracic and Mediastinal Disorders: Atelectasis, breath sounds
268 decreased, chronic obstructive airways disease, cough, epistaxis, hemoptysis, lung disorder,
269 pleural effusion, pulmonary congestion, rales, respiratory failure, rhinitis, throat tightness.

270 Skin and Subcutaneous Tissue Disorders: Alopecia, dermatitis, dry skin, erythema,
271 nail abnormality, petechiae, pruritus, sweating increased, urticaria.

272 Vascular Disorders: Arterial embolism limb, deep limb venous thrombosis, flushing,
273 hematoma, hypertension, hypertensive crisis, hypotension, labile blood pressure, pallor,
274 peripheral coldness, peripheral vascular disease, thrombosis.

275 **7 DRUG INTERACTIONS**

276 **7.1 CYP2D6 and CYP3A4 Inhibitors**

277 Drugs that inhibit CYP2D6 (such as desipramine, paroxetine, ritonavir, sertraline) and
278 CYP3A4 (such as ketoconazole, ritonavir, saquinavir, erythromycin, and grapefruit juice) can be
279 expected to cause increased plasma levels of propafenone. The combination of CYP3A4
280 inhibition and either CYP2D6 deficiency or CYP2D6 inhibition with administration of
281 propafenone may increase the risk of adverse reactions, including proarrhythmia. Therefore,
282 simultaneous use of RYTHMOL SR with both a CYP2D6 inhibitor and a CYP3A4 inhibitor
283 should be avoided [*see Warnings and Precautions (5.4) and Dosage and Administration (2)*].

284 Amiodarone: Concomitant administration of propafenone and amiodarone can affect
285 conduction and repolarization and is not recommended.

286 Cimetidine: Concomitant administration of propafenone immediate-release tablets and
287 cimetidine in 12 healthy subjects resulted in a 20% increase in steady-state plasma
288 concentrations of propafenone.

289 Fluoxetine: Concomitant administration of propafenone and fluoxetine in extensive
290 metabolizers increased the S propafenone C_{max} and AUC by 39 and 50% and the R propafenone
291 C_{max} and AUC by 71 and 50%.

292 Quinidine: Small doses of quinidine completely inhibit the CYP2D6 hydroxylation
293 metabolic pathway, making all patients, in effect, slow metabolizers [*see Clinical Pharmacology*
294 *(12)*]. Concomitant administration of quinidine (50 mg three times daily) with 150 mg
295 immediate-release propafenone three times daily decreased the clearance of propafenone by 60%
296 in extensive metabolizers, making them poor metabolizers. Steady-state plasma concentrations
297 increased by more than 2-fold for propafenone, and decreased 50% for 5-OH-propafenone. A
298 100 mg dose of quinidine increased steady state concentrations of propafenone 3-fold. Avoid
299 concomitant use of propafenone and quinidine.

300 Rifampin: Concomitant administration of rifampin and propafenone in extensive
301 metabolizers decreased the plasma concentrations of propafenone by 67% with a corresponding
302 decrease of 5-OH-propafenone by 65%. The concentrations of norpropafenone increased by
303 30%. In poor metabolizers, there was a 50% decrease in propafenone plasma concentrations and
304 increased the AUC and C_{max} of norpropafenone by 74 and 20%, respectively. Urinary excretion
305 of propafenone and its metabolites decreased significantly. Similar results were noted in elderly

306 patients: Both the AUC and C_{\max} propafenone decreased by 84%, with a corresponding decrease
307 in AUC and C_{\max} of 5-OH-propafenone by 69 and 57%.

308 **7.2 Digoxin**

309 Concomitant use of propafenone and digoxin increased steady-state serum digoxin
310 exposure (AUC) in patients by 60 to 270%, and decreased the clearance of digoxin by 31 to
311 67%. Monitor plasma digoxin levels of patients receiving propafenone and adjust digoxin dosage
312 as needed.

313 **7.3 Warfarin**

314 The concomitant administration of propafenone and warfarin increased warfarin plasma
315 concentrations at steady state by 39% in healthy volunteers and prolonged the prothrombin time
316 (PT) in patients taking warfarin. Adjust the warfarin dose as needed by monitoring INR
317 (international normalized ratio).

318 **7.4 Orlistat**

319 Orlistat may limit the fraction of propafenone available for absorption. In post marketing
320 reports, abrupt cessation of orlistat in patients stabilized on propafenone has resulted in severe
321 adverse events including convulsions, atrioventricular block and acute circulatory failure.

322 **7.5 Beta-Antagonists**

323 Concomitant use of propafenone and propranolol in healthy subjects increased
324 propranolol plasma concentrations at steady state by 113%. In 4 patients, administration of
325 metoprolol with propafenone increased the metoprolol plasma concentrations at steady state by
326 100 to 400%. The pharmacokinetics of propafenone was not affected by the coadministration of
327 either propranolol or metoprolol. In clinical trials using propafenone immediate-release tablets,
328 patients who were receiving beta-blockers concurrently did not experience an increased
329 incidence of side effects.

330 **7.6 Lidocaine**

331 No significant effects on the pharmacokinetics of propafenone or lidocaine have been
332 seen following their concomitant use in patients. However, concomitant use of propafenone and
333 lidocaine has been reported to increase the risks of central nervous system side effects of
334 lidocaine.

335 **8 USE IN SPECIFIC POPULATIONS**

336 **8.1 Pregnancy**

337 Pregnancy Category C. There are no adequate and well-controlled studies in pregnant
338 women. RYTHMOL SR should be used during pregnancy only if the potential benefit justifies
339 the potential risk to the fetus.

340 Animal Data: Teratogenic Effects: Propafenone has been shown to be embryotoxic
341 (decreased survival) in rabbits and rats when given in oral maternally toxic doses of
342 150 mg/kg/day (about 3 times the maximum recommended human dose [MRHD] on a mg/m^2
343 basis) and 600 mg/kg/day (about 6 times the MRHD on a mg/m^2 basis), respectively. Although
344 maternally tolerated doses (up to 270 mg/kg/day, about 3 times the MRHD on a mg/m^2 basis)

345 produced no evidence of embryotoxicity in rats, post-implantation loss was elevated in all rabbit
346 treatment groups (doses as low as 15 mg/kg/day, about 1/3 the MRHD on a mg/m² basis).

347 *Non-teratogenic Effects:* In a study in which female rats received daily oral doses of
348 propafenone from mid-gestation through weaning of their offspring, doses as low as
349 90 mg/kg/day (equivalent to the MRHD on a mg/m² basis) produced increases in maternal
350 deaths. Doses of 360 or more mg/kg/day (4 or more times the MRHD on a mg/m² basis) resulted
351 in reductions in neonatal survival, body weight gain and physiological development.

352 **8.2 Labor and Delivery**

353 It is not known whether the use of propafenone during labor or delivery has immediate or
354 delayed adverse effects on the fetus, or whether it prolongs the duration of labor or increases the
355 need for forceps delivery or other obstetrical intervention.

356 **8.3 Nursing Mothers**

357 Propafenone is excreted in human milk. Because of the potential for serious adverse
358 reactions in nursing infants from propafenone, decide whether to discontinue nursing or to
359 discontinue the drug, taking into account the importance of the drug to the mother.

360 **8.4 Pediatric Use**

361 The safety and effectiveness of propafenone in pediatric patients have not been
362 established.

363 **8.5 Geriatric Use**

364 Of the total number of subjects in Phase 3 clinical studies of RYTHMOL SR
365 (propafenone hydrochloride) 46% were 65 and over, while 16% were 75 and over. No overall
366 differences in safety or effectiveness were observed between these subjects and younger
367 subjects, but greater sensitivity of some older individuals at higher doses cannot be ruled out.
368 The effect of age on the pharmacokinetics and pharmacodynamics of propafenone has not been
369 studied.

370 **10 OVERDOSAGE**

371 The symptoms of overdose may include hypotension, somnolence, bradycardia, intra-
372 atrial and intraventricular conduction disturbances, and rarely convulsions and high grade
373 ventricular arrhythmias. Defibrillation as well as infusion of dopamine and isoproterenol have
374 been effective in controlling abnormal rhythm and blood pressure. Convulsions have been
375 alleviated with intravenous diazepam. General supportive measures such as mechanical
376 respiratory assistance and external cardiac massage may be necessary.

377 The hemodialysis of propafenone in patients with an overdose is expected to be of limited
378 value in the removal of propafenone as a result of both its high protein binding (>95%) and large
379 volume of distribution.

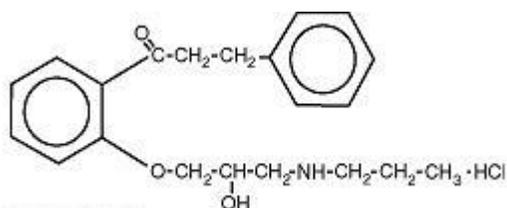
380 **11 DESCRIPTION**

381 RYTHMOL SR (propafenone hydrochloride) is an antiarrhythmic drug supplied in
382 extended-release capsules of 225, 325 and 425 mg for oral administration.

383 Chemically, propafenone hydrochloride is 2'-[2-Hydroxy-3-(propylamino)-propoxy]-3-
384 phenylpropiofenone hydrochloride, with a molecular weight of 377.92. The molecular formula
385 is $C_{21}H_{27}NO_3 \cdot HCl$.

386 Propafenone HCl has some structural similarities to beta-blocking agents. The structural
387 formula of propafenone HCl is given below:

388



389

390

391 Propafenone HCl occurs as colorless crystals or white crystalline powder with a very
392 bitter taste. It is slightly soluble in water (20°C), chloroform and ethanol. RYTHMOL SR
393 capsules are filled with cylindrical-shaped 2 x 2 mm microtablets containing propafenone and
394 the following inactive ingredients: antifoam, gelatin, hypromellose, red iron oxide, magnesium
395 stearate, shellac, sodium lauryl sulfate, sodium dodecyl sulfate, soy lecithin and titanium dioxide.

396 12 CLINICAL PHARMACOLOGY

397 12.1 Mechanism of Action

398 Propafenone is a Class 1C antiarrhythmic drug with local anesthetic effects, and a direct
399 stabilizing action on myocardial membranes. The electrophysiological effect of propafenone
400 manifests itself in a reduction of upstroke velocity (Phase 0) of the monophasic action potential.
401 In Purkinje fibers, and to a lesser extent myocardial fibers, propafenone reduces the fast inward
402 current carried by sodium ions. Diastolic excitability threshold is increased and effective
403 refractory period prolonged. Propafenone reduces spontaneous automaticity and depresses
404 triggered activity.

405 Studies in anesthetized dogs and isolated organ preparations show that propafenone has
406 beta-sympatholytic activity at about 1/50 the potency of propranolol. Clinical studies employing
407 isoproterenol challenge and exercise testing after single doses of propafenone indicate a beta-
408 adrenergic blocking potency (per mg) about 1/40 that of propranolol in man. In clinical trials
409 with the immediate-release formulation, resting heart rate decreases of about 8% were noted at
410 the higher end of the therapeutic plasma concentration range. At very high concentrations *in*
411 *vitro*, propafenone can inhibit the slow inward current carried by calcium, but this calcium
412 antagonist effect probably does not contribute to antiarrhythmic efficacy. Moreover, propafenone
413 inhibits a variety of cardiac potassium currents in *in vitro* studies (i.e. the transient outward, the
414 delayed rectifier, and the inward rectifier current). Propafenone has local anesthetic activity
415 approximately equal to procaine. Compared to propafenone, the main metabolite, 5-
416 hydroxypropafenone, has similar sodium and calcium channel activity, but about 10 times less

417 beta-blocking activity (N-depropylpropafenone has weaker sodium channel activity but
418 equivalent affinity for beta-receptors).

419 **12.2 Pharmacodynamics**

420 Electrophysiology: Electrophysiology studies in patients with ventricular tachycardia
421 have shown that propafenone prolongs atrioventricular conduction while having little or no effect
422 on sinus node function. Both atrioventricular nodal conduction time (AH interval) and His-
423 Purkinje conduction time (HV interval) are prolonged. Propafenone has little or no effect on the
424 atrial functional refractory period, but AV nodal functional and effective refractory periods are
425 prolonged. In patients with Wolff-Parkinson-White syndrome, RYTHMOL immediate-release
426 tablets reduce conduction and increase the effective refractory period of the accessory pathway
427 in both directions.

428 Electrocardiograms: Propafenone prolongs the PR and QRS intervals. Prolongation of
429 the QRS interval makes it difficult to interpret the effect of propafenone on the QT interval.

430

431 **Table 1. Mean Change ± SD in 12-Lead Electrocardiogram Results (RAFT)**

	RYTHMOL SR Twice Daily Dosing			Placebo
	225 mg	325 mg	425 mg	
	n=126	n=135	n=136	
PR (ms)	9±22	12±23	21±24	1±16
QRS (ms)	4±14	6±15	6±15	-2±12
Heart rate	5±24	7±23	2±22	8±27
QTc ^a (ms)	2±30	5±36	6±37	5±35

432 ^a Calculated using Bazett's correction factor

433

434 In RAFT [see *Clinical Studies (14)*], the distribution of the maximum changes in QTc
435 compared to baseline over the study in each patient was similar in the RYTHMOL SR 225 mg
436 twice daily, 325 mg twice daily, and 425 mg twice daily and placebo dose groups. Similar results
437 were seen in the ERAFT study.

438

439 **Table 2. Number of Patients According to the Range of Maximum QTc Change Compared**
440 **to Baseline Over the Study in Each Dose Group (RAFT Study).**

Range maximum QTc change	RYTHMOL SR			Placebo
	225 mg twice daily	325 mg twice daily	425 mg twice daily	
	N=119	N=129	N=123	N=100
	n (%)	n (%)	n (%)	n (%)
>20%	1 (1)	6 (5)	3 (2)	5 (4)
10-20%	19 (16)	28 (22)	32 (26)	24 (20)
0 ≤10%	99 (83)	95 (74)	88 (72)	91 (76)

441

442 **Hemodynamics:** Studies in humans have shown that propafenone exerts a negative
443 inotropic effect on the myocardium. Cardiac catheterization studies in patients with moderately
444 impaired ventricular function (mean C.I.=2.61 L/min/m²), utilizing intravenous propafenone
445 infusions (loading dose of 2 mg/kg over 10 min+ followed by 2 mg/min for 30 min) that gave
446 mean plasma concentrations of 3.0 µg/mL (a dose that produces plasma levels of propafenone
447 greater than does recommended oral dosing), showed significant increases in pulmonary
448 capillary wedge pressure, systemic and pulmonary vascular resistances and depression of cardiac
449 output and cardiac index.

450 **12.3 Pharmacokinetics**

451 **Absorption/Bioavailability:** Maximal plasma levels of propafenone are reached between
452 3 to 8 hours following the administration of RYTHMOL SR. Propafenone is known to undergo
453 extensive and saturable presystemic biotransformation which results in a dose and dosage form
454 dependent absolute bioavailability; e.g., a 150 mg immediate-release tablet had an absolute
455 bioavailability of 3.4%, while a 300 mg immediate-release tablet had an absolute bioavailability
456 of 10.6%. Absorption from a 300 mg solution dose was rapid, with an absolute bioavailability of
457 21.4%. At still larger doses, above those recommended, bioavailability of propafenone from
458 immediate-release tablets increased still further.

459 Relative bioavailability assessments have been performed between RYTHMOL SR
460 capsules and RYTHMOL immediate-release tablets. In extensive metabolizers, the
461 bioavailability of propafenone from the SR formulation was less than that of the immediate-
462 release formulation as the more gradual release of propafenone from the prolonged-release
463 preparations resulted in an increase of overall first pass metabolism [*see Metabolism*]. As a
464 result of the increased first pass effect, higher daily doses of propafenone were required from the
465 SR formulation relative to the immediate-release formulation, to obtain similar exposure to
466 propafenone. The relative bioavailability of propafenone from the 325 twice daily regimens of
467 RYTHMOL SR approximates that of RYTHMOL immediate-release 150 mg three times daily

468 regimen. Mean exposure to 5-hydroxypropafenone was about 20 to 25% higher after SR capsule
469 administration than after immediate-release tablet administration.

470 Food increased the exposure to propafenone 4-fold after single dose administration of
471 425 mg of RYTHMOL SR. However, in the multiple dose study (425 mg dose twice daily), the
472 difference between the fed and fasted state was not significant.

473 **Distribution:** Following intravenous administration of propafenone, plasma levels decline
474 in a bi-phasic manner consistent with a 2 compartment pharmacokinetic model. The average
475 distribution half-life corresponding to the first phase was about 5 minutes. The volume of the
476 central compartment was about 88 liters (1.1 L/kg) and the total volume of distribution about 252
477 liters.

478 In serum, propafenone is greater than 95% bound to proteins within the concentration
479 range of 0.5 to 2 µg/mL.

480 **Metabolism:** There are two genetically determined patterns of propafenone metabolism.
481 In over 90% of patients, the drug is rapidly and extensively metabolized with an elimination half-
482 life from 2-10 hours. These patients metabolize propafenone into two active metabolites: 5-
483 hydroxypropafenone which is formed by CYP2D6 and N-depropylpropafenone
484 (norpropafenone) which is formed by both CYP3A4 and CYP1A2. In less than 10% of patients,
485 metabolism of propafenone is slower because the 5-hydroxy metabolite is not formed or is
486 minimally formed. In these patients, the estimated propafenone elimination half-life ranges from
487 10 to 32 hours. Decreased ability to form the 5-hydroxy metabolite of propafenone is associated
488 with a diminished ability to metabolize debrisoquine and a variety of other drugs such as
489 encainide, metoprolol, and dextromethorphan whose metabolism is mediated by the CYP2D6
490 isozyme. In these patients, the N-depropylpropafenone metabolite occurs in quantities
491 comparable to the levels occurring in extensive metabolizers.

492 As a consequence of the observed differences in metabolism, administration of
493 RYTHMOL SR to slow and extensive metabolizers results in significant differences in plasma
494 concentrations of propafenone, with slow metabolizers achieving concentrations about twice
495 those of the extensive metabolizers at daily doses of 850 mg/day. At low doses the differences
496 are greater, with slow metabolizers attaining concentrations about 3 to 4 times higher than
497 extensive metabolizers. In extensive metabolizers, saturation of the hydroxylation pathway
498 (CYP2D6) results in greater-than-linear increases in plasma levels following administration of
499 RYTHMOL SR capsules. In slow metabolizers, propafenone pharmacokinetics is linear. Because
500 the difference decreases at high doses and is mitigated by the lack of the active 5-
501 hydroxymetabolite in the slow metabolizers, and because steady-state conditions are achieved
502 after 4 to 5 days of dosing in all patients, the recommended dosing regimen of RYTHMOL SR is
503 the same for all patients. The larger inter-subject variability in blood levels require that the dose
504 of the drug be titrated carefully in patients with close attention paid to clinical and ECG evidence
505 of toxicity [*see Dosage and Administration (2)*].

506 The 5-hydroxypropafenone and norpropafenone metabolites have electrophysiologic
507 properties similar to propafenone *in vitro*. In man after administration of RYTHMOL SR, the 5-

508 hydroxypropafenone metabolite is usually present in concentrations less than 40% of
509 propafenone. The norpropafenone metabolite is usually present in concentrations less than 10%
510 of propafenone.

511 *Inter-Subject Variability:* With propafenone, there is a considerable degree of inter-
512 subject variability in pharmacokinetics which is due in large part to the first pass hepatic effect
513 and non-linear pharmacokinetics in extensive metabolizers. A higher degree of inter-subject
514 variability in pharmacokinetic parameters of propafenone was observed following both single
515 and multiple dose administration of RYTHMOL SR capsules. Inter-subject variability appears to
516 be substantially less in the poor metabolizer group than in the extensive metabolizer group,
517 suggesting that a large portion of the variability is intrinsic to CYP2D6 polymorphism rather
518 than to the formulation.

519 *Stereochemistry:* RYTHMOL is a racemic mixture. The R- and S-enantiomers of
520 propafenone display stereoselective disposition characteristics. *In vitro* and *in vivo* studies have
521 shown that the R-isomer of propafenone is cleared faster than the S-isomer via the 5-
522 hydroxylation pathway (CYP2D6). This results in a higher ratio of S-propafenone to R-
523 propafenone at steady state. Both enantiomers have equivalent potency to block sodium
524 channels; however, the S-enantiomer is a more potent β -antagonist than the R-enantiomer.
525 Following administration of RYTHMOL immediate-release tablets or RYTHMOL SR capsules,
526 the S/R ratio for the area under the plasma concentration-time curve was about 1.7. The S/R
527 ratios of propafenone obtained after administration of 225, 325 and 425 mg RYTHMOL SR are
528 independent of dose. In addition, no difference in the average values of the S/R ratios is evident
529 between genotypes or over time.

530 *Special Populations: Hepatic Impairment:* Decreased liver function increases the
531 bioavailability of propafenone. Absolute bioavailability assessments have not been determined
532 for the RYTHMOL SR capsule formulation. Absolute bioavailability of RYTHMOL immediate-
533 release tablets is inversely related to indocyanine green clearance, reaching 60-70% at clearances
534 of 7 mL/min and below. Protein binding decreases to about 88% in patients with severe hepatic
535 dysfunction. The clearance of propafenone is reduced and the elimination half-life increased in
536 patients with significant hepatic dysfunction [*see Warnings and Precautions (5.9)*].

537 **13 NONCLINICAL TOXICOLOGY**

538 **13.1 Carcinogenesis, Mutagenesis, Impairment of Fertility**

539 Lifetime maximally tolerated oral dose studies in mice (up to 360 mg/kg/day, about twice
540 the maximum recommended human oral daily dose [MRHD] on a mg/m² basis) and rats (up to
541 270 mg/kg/day, about 3 times the MRHD on a mg/m² basis) provided no evidence of a
542 carcinogenic potential for propafenone HCl.

543 Propafenone HCl tested negative for mutagenicity in the Ames (salmonella) test and in
544 the *in vivo* mouse dominant lethal test. It tested negative for clastogenicity in the human
545 lymphocyte chromosome aberration assay *in vitro* and in rat and Chinese hamster micronucleus

546 tests, and other *in vivo* tests for chromosomal aberrations in rat bone marrow and Chinese
547 hamster bone marrow and spermatogonia.

548 Propafenone HCl, administered intravenously to rabbits, dogs, and monkeys, has been
549 shown to decrease spermatogenesis. These effects were reversible, were not found following oral
550 dosing of propafenone HCl, were seen at lethal or near lethal dose levels and were not seen in
551 rats treated either orally or intravenously [*see Warnings and Precautions (5.13)*]. Treatment of
552 male rabbits for 10 weeks prior to mating at an oral dose of 120 mg/kg/day (about 2.4 times the
553 MRHD on a mg/m² basis) or an intravenous dose of 3.5 mg/kg/day (a spermatogenesis-impairing
554 dose) did not result in evidence of impaired fertility. Nor was there evidence of impaired fertility
555 when propafenone HCl was administered orally to male and female rats at dose levels up to
556 270 mg/kg/day (about 3 times the MRHD on a mg/m² basis).

557 **13.2 Animal Toxicology and/or Pharmacology**

558 Renal and Hepatic Toxicity in Animals: Renal changes have been observed in the rat
559 following 6 months of oral administration of propafenone HCl at doses of 180 and
560 360 mg/kg/day (about 2 and 4 times, respectively, the MRHD on a mg/m² basis). Both
561 inflammatory and non-inflammatory changes in the renal tubules, with accompanying interstitial
562 nephritis, were observed. These changes were reversible, as they were not found in rats allowed
563 to recover for 6 weeks. Fatty degenerative changes of the liver were found in rats following
564 longer durations of administration of propafenone HCl at a dose of 270 mg/kg/day (about 3 times
565 the MRHD on a mg/m² basis). There were no renal or hepatic changes at 90 mg/kg/day
566 equivalent to the MRHD on a mg/m² basis).

567 **14 CLINICAL STUDIES**

568 RYTHMOL SR has been evaluated in patients with a history of electrocardiographically
569 documented recurrent episodes of symptomatic AF in 2 randomized, double-blind, placebo
570 controlled trials.

571 RAFT: In one US multicenter study (Rythmol SR Atrial Fibrillation Trial, RAFT), 3
572 doses of RYTHMOL SR (225 mg twice daily, 325 mg twice daily and 425 mg twice daily) and
573 placebo were compared in 523 patients with symptomatic, episodic AF. The patient population
574 in this trial was 59% male with a mean age of 63 years, 91% White and 6% Black. The patients
575 had a median history of AF of 13 months, and documented symptomatic AF within 12 months of
576 study entry. Over 90% were NYHA Class I, and 21% had a prior electrical cardioversion. At
577 baseline, 24% were treated with calcium channel blockers, 37% with beta blockers, and 38%
578 with digoxin. Symptomatic arrhythmias after randomization were documented by transtelephonic
579 electrocardiogram and centrally read and adjudicated by a blinded adverse event committee.
580 RYTHMOL SR administered for up to 39 weeks was shown to prolong significantly the time to
581 the first recurrence of symptomatic atrial arrhythmia, predominantly AF, from Day 1 of
582 randomization (primary efficacy variable) compared to placebo, as shown in Table 3.
583

584 **Table 3: Analysis of Tachycardia-Free Period (Days) from Day 1 of Randomization**

Parameter	RYTHMOL SR Dose			Placebo (N = 126) n (%)
	225 mg twice daily (N = 126) n (%)	325 mg twice daily (N = 135) n (%)	425 mg twice daily (N = 136) n (%)	
Patients completing with terminating event ^a	66 (52)	56 (41)	41 (30)	87 (69)
Comparison of tachycardia-free periods				
Kaplan-Meier Media	112	291	NA ^b	41
Range	0 - 285	0 - 293	0 - 300	0 - 289
p-Value (Log-rank test)	0.014	<0.0001	<0.0001	--
Hazard Ratio compared to placebo	0.67	0.43	0.35	--
95% CI for Hazard Ratio	(0.49, 0.93)	(0.31, 0.61)	(0.24, 0.51)	--

585 ^a Terminating events comprised 91% AF, 5% atrial flutter, and 4% PSVT.

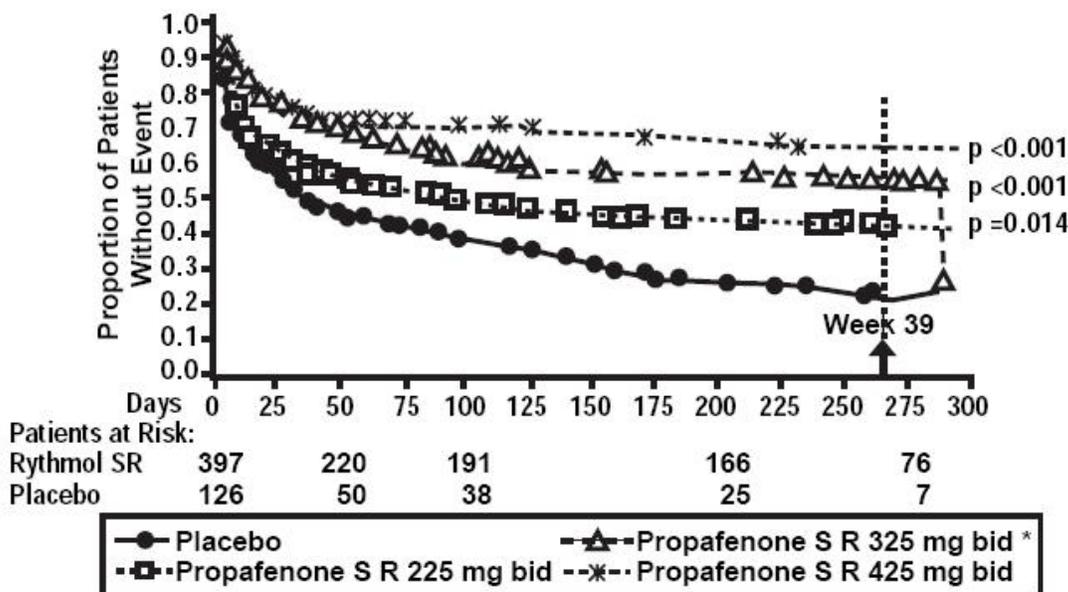
586 ^b Not Applicable: Fewer than 50% of the patients had events. The median time is not calculable.

587

588 There was a dose response for RYTHMOL SR for the tachycardia free period as shown in
589 the proportional hazard analysis and the Kaplan-Meier curves presented in Figure 1.

590

591 **Figure 1: RAFT Kaplan-Meier Analysis for the Tachycardia-Free Period From Day 1 of**
 592 **Randomization:**
 593



* Patient closeout started on Day 273 (week 39) and lasted until 300 days.
 On day 291, of the 2 patients that were left on 325 mg, 1 had an event,
 causing a 50% decline in the Kaplan-Meier curves

594
 595

596 In additional analyses, RYTHMOL SR (225 mg twice daily, 325 mg twice daily, and
 597 425 mg twice daily) was also shown to prolong time to the first recurrence of symptomatic AF
 598 from Day 5 (steady-state pharmacokinetics were attained). The antiarrhythmic effect of
 599 RYTHMOL SR was not influenced by age, gender, history of cardioversion, duration of AF,
 600 frequency of AF or use of medication that lowers heart rate. Similarly, the antiarrhythmic effect
 601 of RYTHMOL SR was not influenced by the individual use of calcium channel blockers, beta-
 602 blockers or digoxin. Too few non-White patients were enrolled to assess the influence of race on
 603 effects of RYTHMOL SR (propafenone hydrochloride).

604 No difference in the average heart rate during the first recurrence of symptomatic
 605 arrhythmia between RYTHMOL SR and placebo was observed.

606 **ERAFT:** In a European multicenter trial [(European Rythmonorm SR Atrial Fibrillation
 607 Trial (ERAFT)], 2 doses of RYTHMOL SR (325 mg twice daily and 425 mg twice daily) and
 608 placebo were compared in 293 patients with documented electrocardiographic evidence of
 609 symptomatic paroxysmal AF. The patient population in this trial was 61% male, 100% White
 610 with a mean age of 61 years. Patients had a median duration of AF of 3.3 years, and 61% were
 611 taking medications that lowered heart rate. At baseline, 15% of the patients were treated with
 612 calcium channel blockers (verapamil and diltiazem), 42% with beta-blockers and 8% with
 613 digoxin. During a qualifying period of up to 28 days, patients had to have 1 ECG-documented
 614 incident of symptomatic AF. The double-blind treatment phase consisted of a 4 day loading

615 period followed by a 91-day efficacy period. Symptomatic arrhythmias were documented by
616 electrocardiogram monitoring.

617 In ERAFT, RYTHMOL SR was shown to prolong the time to the first recurrence of
618 symptomatic atrial arrhythmia from Day 5 of randomization (primary efficacy analysis). The
619 proportional hazard analysis revealed that both RYTHMOL SR doses were superior to placebo.
620 The antiarrhythmic effect of propafenone SR was not influenced by age, gender, duration of AF,
621 frequency of AF or use of medication that lowers heart rate. It was also not influenced by the
622 individual use of calcium channel blockers, beta-blockers or digoxin. Too few non-White
623 patients were enrolled to assess the influence of race on the effects of RYTHMOL SR. There
624 was a slight increase in the incidence of centrally diagnosed asymptomatic AF or atrial flutter in
625 each of the 2 RYTHMOL SR treatment groups compared to placebo.

626 **16 HOW SUPPLIED/STORAGE AND HANDLING**

627 RYTHMOL SR (propafenone HCl) capsules are supplied as white, opaque, hard gelatin
628 capsules containing either 225 mg, 325 mg, or 425 mg of propafenone HCl. The 225 mg strength
629 is imprinted in red with GS EUG followed by 225. The 325 mg strength is imprinted in red with
630 GS F1Y followed by 325, and also has a single red band around $\frac{3}{4}$ of the circumference of the
631 body. The 425 mg strength is imprinted in red with GS UY2 followed by 425, and also has three
632 red bands around $\frac{3}{4}$ of the circumference of the body.

633

Capsule Strength	60 count bottle NDC
225 mg	0173-0823-18
325 mg	0173-0824-18
425 mg	0173-0826-18

634

635 **Storage:** Store at 25°C (77°F); excursions permitted to 15° to 30°C (59° to 86°F). Dispense in a
636 tight container.

637 **17 PATIENT COUNSELING INFORMATION**

638 See FDA-approved patient labeling (Patient Information).

639 **17.1 Information for Patients**

- 640
- 641 • Patients should be instructed to notify their health care providers of any change in over-the-
642 counter, prescription and supplement use. The health care provider should assess the patients’
643 medication history including all over-the-counter, prescription and herbal/natural
644 preparations for those that may affect the pharmacodynamics or kinetics of RYTHMOL SR
645 [see *Warnings and Precautions (5.4)*].
 - 646 • Patients should also check with their health care providers prior to taking a new over-the-
counter medicine.

- 647 • If patients experience symptoms that may be associated with altered electrolyte balance, such
648 as excessive or prolonged diarrhea, sweating, vomiting, or loss of appetite or thirst, these
649 conditions should be immediately reported to their health care provider.
650 • Patients should be instructed NOT to double the next dose if a dose is missed. The next dose
651 should be taken at the usual time.

652

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654

655 Distributed by:



656

657 GlaxoSmithKline

658 Research Triangle Park, NC 27709

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661

662 RMS:7PI

663 PHARMACIST-DETACH HERE AND GIVE INSTRUCTIONS TO PATIENT

664 -----

665

666

PATIENT INFORMATION

667

RYTHMOL SR® (RITH-MaII)

668

(propafenone hydrochloride) Extended-Release Capsules

669

670 Read this Patient Information Leaflet before you start taking RYTHMOL SR and each
671 time you get a refill. There may be new information. This information does not take
672 the place of talking with your doctor about your medical condition or your
673 treatment.

674

675 **What is RYTHMOL SR?**

676 RYTHMOL SR is a prescription medicine that is used:

- 677 • in certain people who have a heart rhythm disorder called atrial fibrillation (AF)
- 678 • to increase the amount of time between having symptoms of AF

679

680 It is not known if RYTHMOL SR is safe and effective in children.

681

682 **Who should not take RYTHMOL SR?**

683 Do not take RYTHMOL SR if you have:

- 684 • heart failure (weak heart)
- 685 • had a recent heart attack
- 686 • have a heart condition called Brugada Syndrome
- 687 • a heart rate that is too slow, and you do not have a pacemaker
- 688 • very low blood pressure
- 689 • certain breathing problems that make you short of breath or wheeze
- 690 • certain abnormal body salt (electrolyte) levels in your blood

691

692 Talk to your doctor before taking RYTHMOL SR if you think you have any of the
693 conditions listed above.

694

695 **What should I tell my doctor before taking RYTHMOL SR?**

696 Before you take RYTHMOL SR, tell your doctor if you:

- 697 • have liver or kidney problems
- 698 • have breathing problems
- 699 • have symptoms including diarrhea, sweating, vomiting, or loss of appetite or
700 thirst that are severe. These symptoms may be a sign of abnormal electrolyte
701 levels in your blood.
- 702 • have myasthenia gravis
- 703 • have lupus erythematosus

- 704 • have been told you have or had an abnormal blood test called Antinuclear
705 Antibody Test or ANA Test
- 706 • are pregnant or plan to become pregnant. It is not known if RYTHMOL SR will
707 harm your unborn baby.
- 708 • are breastfeeding or plan to breastfeed. RYTHMOL SR can pass into your milk
709 and may harm your baby. You and your doctor should decide if you will
710 breastfeed or take RYTHMOL SR. You should not do both.
- 711 • have any other medical conditions

712

713 **Tell your doctor about all the medicines you take**, including prescription and
714 non-prescription medicines, vitamins, and herbal supplements. RYTHMOL SR and
715 certain other medicines can affect each other and cause serious side effects.
716 RYTHMOL SR may affect the way other medicines work, and other medicines may
717 affect how RYTHMOL SR works.

718

719 **Especially tell your doctor if you take:**

- 720 • amiodarone or other medicines for your abnormal heart beats
- 721 • an antidepressant medicine
- 722 • a medicine to treat anxiety
- 723 • ritonavir (for example, KALETRA[®], NORVIR[®]) or saquinavir (for example,
724 INVIRASE[®])
- 725 • an antibiotic medicine
- 726 • ketoconazole (for example, NIZORAL[®])
- 727 • digoxin (LANOXIN[®])
- 728 • warfarin sodium (for example, COUMADIN[®], JANTOVEN[®])

729

730 Know the medicines you take. Keep a list of them to show your doctor and
731 pharmacist when you get a new medicine.

732

733 **How should I take RYTHMOL SR?**

- 734 • Take RYTHMOL SR exactly as prescribed. Your doctor will tell you how many
735 capsules to take and how often to take them.
- 736 • To help reduce the chance of certain side effects, your doctor may start you with
737 a low dose of RYTHMOL SR, and then slowly increase the dose.
- 738 • Do not open or crush the capsule.
- 739 • You may take RYTHMOL SR with or without food.
- 740 • You should not drink grapefruit juice during treatment with RYTHMOL SR.
- 741 • If you miss a dose of RYTHMOL SR, take your next dose at the usual time. Do
742 not take 2 doses at the same time.

- 743 • If you take too much RYTHMOL SR, call your doctor or go to the nearest hospital
744 emergency room right away.
745 • Call your doctor if your heart problems get worse.
746

747 **What are possible side effects of RYTHMOL SR?**

748 **RYTHMOL SR can cause serious side effects including:**
749

- 750 • **New or worsened abnormal heart beats, that can cause sudden death**
751 **or be life-threatening.** Your doctor may do an electrocardiogram (ECG or
752 EKG) before and during treatment to check your heart for these problems.
753
- 754 • **New or worsened heart failure. Tell your doctor about any changes in**
755 **your heart symptoms, including:**
756 o any new or increased swelling in your arms or legs
757 o trouble breathing
758 o sudden weight gain
759
- 760 • **Effects on pacemaker function.** RYTHMOL SR may affect how an
761 implanted pacemaker or defibrillator works. Your doctor should check how
762 your pacemaker or defibrillator is working during and after treatment with
763 RYTHMOL SR. They may need to be re-programmed.
764
- 765 • **Very low white blood cell levels in your blood (agranulocytosis).** Your
766 bone marrow may not produce enough of a certain type of white blood cells
767 called neutrophils. If this happens, you are more likely to get infections. Tell
768 your doctor right away if you have any of these symptoms, especially during
769 the first 3 months of treatment:
770 o fever
771 o sore throat
772 o chills
773
- 774 • **Worsening of myasthenia gravis in people who already have this**
775 **condition.** Tell your doctor about any change in your symptoms.
776
- 777 • **RYTHMOL SR may cause lower sperm counts in men.** This could affect
778 the ability to father a child. Talk to your doctor if this is a concern for you.
779

780 Common side effects of RYTHMOL SR include:

- 781 • dizziness
782 • fast or irregular heart beats

- 783 • chest pain
- 784 • trouble breathing
- 785 • taste changes
- 786 • nausea
- 787 • tiredness
- 788 • feeling anxious
- 789 • constipation
- 790 • upper respiratory infection or flu
- 791 • swelling

792

793 Tell your doctor if you have any side effect that bothers you or that does not go
794 away.

795 These are not all the possible side effects of RYTHMOL SR. For more information,
796 ask your doctor or pharmacist.

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

799

800 **How should I store RYTHMOL SR?**

- 801 • Store RYTHMOL SR at room temperature between 59°F to 86°F (15°C to 30°C).
- 802 • Keep the bottle tightly closed.

803

804 **Keep RYTHMOL SR and all medicines out of the reach of children.**

805

806 **General information about RYTHMOL SR**

807 Medicines are sometimes prescribed for conditions other than those described in
808 patient information leaflets. Do not use RYTHMOL SR for a condition for which it
809 was not prescribed by your doctor. Do not give RYTHMOL SR to other people, even
810 if they have the same symptoms you have. It may harm them.

811

812 This leaflet summarizes the most important information about RYTHMOL SR. If you
813 would like more information, talk with your doctor. You can ask your doctor or
814 pharmacist for information about RYTHMOL SR that is written for healthcare
815 professionals. For more information about RYTHMOL SR, call 1-888-825-5249.

816

817 **What are the ingredients in RYTHMOL SR?**

818 Active Ingredient: Propafenone hydrochloride

819

820 Inactive Ingredients: Antifoam, gelatin, hypromellose, red iron oxide, magnesium
821 stearate, shellac, sodium lauryl sulfate, sodium dodecyl sulfate, soy lecithin and
822 titanium dioxide.

823

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828

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839

840 February 2013

841 RMS: 2PIL