



Femara[®]
(letrozole tablets)

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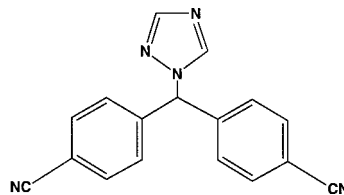
2.5 mg Tablets

Rx only

Prescribing Information

DESCRIPTION

Femara (letrozole tablets) for oral administration contains 2.5 mg of letrozole, a nonsteroidal aromatase inhibitor (inhibitor of estrogen synthesis). It is chemically described as 4,4'-(1H-1,2,4-Triazol-1-ylmethylene)dibenzonitrile, and its structural formula is



Letrozole is a white to yellowish crystalline powder, practically odorless, freely soluble in dichloromethane, slightly soluble in ethanol, and practically insoluble in water. It has a molecular weight of 285.31, empirical formula $C_{17}H_{11}N_5$, and a melting range of 184°C-185°C.

Femara (letrozole tablets) is available as 2.5 mg tablets for oral administration.

Inactive Ingredients. Colloidal silicon dioxide, ferric oxide, hydroxypropyl methylcellulose, lactose monohydrate, magnesium stearate, maize starch, microcrystalline cellulose, polyethylene glycol, sodium starch glycolate, talc, and titanium dioxide.

CLINICAL PHARMACOLOGY

Mechanism of Action

The growth of some cancers of the breast is stimulated or maintained by estrogens. Treatment of breast cancer thought to be hormonally responsive (i.e., estrogen and/or progesterone receptor positive or receptor unknown) has included a variety of efforts to decrease estrogen levels (ovariectomy, adrenalectomy, hypophysectomy) or inhibit estrogen effects (antiestrogens and progestational agents). These interventions lead to decreased tumor mass or delayed progression of tumor growth in some women.

28 In postmenopausal women, estrogens are mainly derived from the action of the aromatase
29 enzyme, which converts adrenal androgens (primarily androstenedione and testosterone) to
30 estrone and estradiol. The suppression of estrogen biosynthesis in peripheral tissues and in
31 the cancer tissue itself can therefore be achieved by specifically inhibiting the aromatase
32 enzyme.

33 Letrozole is a nonsteroidal competitive inhibitor of the aromatase enzyme system; it inhibits
34 the conversion of androgens to estrogens. In adult nontumor- and tumor-bearing female
35 animals, letrozole is as effective as ovariectomy in reducing uterine weight, elevating serum
36 LH, and causing the regression of estrogen-dependent tumors. In contrast to ovariectomy,
37 treatment with letrozole does not lead to an increase in serum FSH. Letrozole selectively
38 inhibits gonadal steroidogenesis but has no significant effect on adrenal mineralocorticoid or
39 glucocorticoid synthesis.

40 Letrozole inhibits the aromatase enzyme by competitively binding to the heme of the
41 cytochrome P450 subunit of the enzyme, resulting in a reduction of estrogen biosynthesis in
42 all tissues. Treatment of women with letrozole significantly lowers serum estrone, estradiol
43 and estrone sulfate and has not been shown to significantly affect adrenal corticosteroid
44 synthesis, aldosterone synthesis, or synthesis of thyroid hormones.

45 **Pharmacokinetics**

46 Letrozole is rapidly and completely absorbed from the gastrointestinal tract and absorption is
47 not affected by food. It is metabolized slowly to an inactive metabolite whose glucuronide
48 conjugate is excreted renally, representing the major clearance pathway. About 90% of
49 radiolabeled letrozole is recovered in urine. Letrozole's terminal elimination half-life is about
50 2 days and steady-state plasma concentration after daily 2.5 mg dosing is reached in 2-
51 6 weeks. Plasma concentrations at steady-state are 1.5 to 2 times higher than predicted from
52 the concentrations measured after a single dose, indicating a slight non-linearity in the
53 pharmacokinetics of letrozole upon daily administration of 2.5 mg. These steady-state levels
54 are maintained over extended periods, however, and continuous accumulation of letrozole
55 does not occur. Letrozole is weakly protein bound and has a large volume of distribution
56 (approximately 1.9 L/kg).

57 **Metabolism and Excretion**

58 Metabolism to a pharmacologically-inactive carbinol metabolite (4,4'-methanol-
59 bisbenzotrile) and renal excretion of the glucuronide conjugate of this metabolite is the
60 major pathway of letrozole clearance. Of the radiolabel recovered in urine, at least 75% was
61 the glucuronide of the carbinol metabolite, about 9% was two unidentified metabolites, and
62 6% was unchanged letrozole.

63 In human microsomes with specific CYP isozyme activity, CYP 3A4 metabolized letrozole to
64 the carbinol metabolite while CYP 2A6 formed both this metabolite and its ketone analog. In
65 human liver microsomes, letrozole strongly inhibited CYP 2A6 and moderately inhibited
66 CYP 2C19.

67 **Special Populations**

68 ***Pediatric, Geriatric and Race:***

69 In the study populations (adults ranging in age from 35 to >80 years), no change in
70 pharmacokinetic parameters was observed with increasing age. Differences in letrozole
71 pharmacokinetics between adult and pediatric populations have not been studied. Differences
72 in letrozole pharmacokinetics due to race have not been studied.

73 ***Renal Insufficiency:***

74 In a study of volunteers with varying renal function (24-hour creatinine clearance:
75 9-116 mL/min), no effect of renal function on the pharmacokinetics of single doses of 2.5 mg
76 of Femara (letrozole tablets) was found. In addition, in a study of 347 patients with advanced
77 breast cancer, about half of whom received 2.5 mg Femara and half 0.5 mg Femara, renal
78 impairment (calculated creatinine clearance: 20-50 mL/min) did not affect steady-state plasma
79 letrozole concentration.

80 ***Hepatic Insufficiency:***

81 In a study of subjects with varying degrees of non-metastatic hepatic dysfunction (e.g.,
82 cirrhosis, Child-Pugh classification A and B), the mean AUC values of the volunteers with
83 moderate hepatic impairment were 37% higher than in normal subjects, but still within the
84 range seen in subjects without impaired function. Patients with severe hepatic impairment
85 (Child-Pugh classification C) have not been studied (see DOSAGE & ADMINISTRATION
86 Hepatic Impairment).

87 ***Drug/Drug Interactions:***

88 A pharmacokinetic interaction study with cimetidine showed no clinically significant effect
89 on letrozole pharmacokinetics. An interaction study with warfarin showed no clinically
90 significant effect of letrozole on warfarin pharmacokinetics.

91 There is no clinical experience to date on the use of Femara in combination with other anti-
92 cancer agents.

93 **Pharmacodynamics**

94 In postmenopausal patients with advanced breast cancer, daily doses of 0.1 mg to 5 mg
95 Femara suppress plasma concentrations of estradiol, estrone, and estrone sulfate by 75%-95%
96 from baseline with maximal suppression achieved within two-three days. Suppression is
97 dose-related, with doses of 0.5 mg and higher giving many values of estrone and estrone
98 sulfate that were below the limit of detection in the assays. Estrogen suppression was
99 maintained throughout treatment in all patients treated at 0.5 mg or higher.

100 Letrozole is highly specific in inhibiting aromatase activity. There is no impairment of
101 adrenal steroidogenesis. No clinically-relevant changes were found in the plasma
102 concentrations of cortisol, aldosterone, 11-deoxycortisol, 17-hydroxy-progesterone, ACTH or
103 in plasma renin activity among postmenopausal patients treated with a daily dose of Femara
104 0.1 mg to 5 mg. The ACTH stimulation test performed after 6 and 12 weeks of treatment with

105 daily doses of 0.1, 0.25, 0.5, 1, 2.5, and 5 mg did not indicate any attenuation of aldosterone
106 or cortisol production. Glucocorticoid or mineralocorticoid supplementation is, therefore, not
107 necessary.

108 No changes were noted in plasma concentrations of androgens (androstenedione and
109 testosterone) among healthy postmenopausal women after 0.1, 0.5, and 2.5 mg single doses of
110 Femara or in plasma concentrations of androstenedione among postmenopausal patients
111 treated with daily doses of 0.1 mg to 5 mg. This indicates that the blockade of estrogen
112 biosynthesis does not lead to accumulation of androgenic precursors. Plasma levels of LH
113 and FSH were not affected by letrozole in patients, nor was thyroid function as evaluated by
114 TSH levels, T3 uptake, and T4 levels.

115 Clinical Studies

116 First-Line Breast Cancer:

117 A randomized, double-blinded, multinational trial compared Femara 2.5 mg with tamoxifen
118 20 mg in 907 postmenopausal patients with locally advanced (Stage IIIB or locoregional
119 recurrence not amenable to treatment with surgery or radiation) or metastatic breast cancer.
120 Time to progression (TTP) was the primary endpoint of the trial. Selected baseline
121 characteristics for this study are shown in the following table:

122 **Table 1: Selected Study Population Demographics**

123 Baseline Status	Femara	tamoxifen
124	N=453	N=454
125 Stage of disease		
126 IIIB	6%	7%
127 IV	93%	92%
128 Receptor Status		
129 ER & PR Positive	38%	41%
130 ER or PR Positive	26%	26%
131 Both unknown	34%	33%
132 ER⁻ or PR⁻ /other unknown	<1%	0
133		
134 Previous Antiestrogen Therapy		
135 Adjuvant	19%	18%
136 None	81%	82%
137		
138 Dominant Site of Disease		
139 Soft Tissue	25%	25%
140 Bone	32%	29%
141 Visceral	43%	46%
142		

143 Femara was superior to tamoxifen in TTP and rate of objective tumor response (see Table 2).
144 No differences were seen in duration of tumor response. Results from the prospectively

145 defined secondary endpoint of time to treatment failure and clinical benefit were supportive of
146 the results of the primary efficacy endpoint.

147 Table 2 summarizes the results of the trial, with a total median follow-up of approximately
148 18 months. (All analyses are unadjusted and use 2-sided p-values.)

149

150 **Table 2: Results**

	Femara 2.5 mg N = 453	tamoxifen 20 mg N = 454	ratio (95% CI) p-value (2-sided)
152 Median Time to progression	9.4 months	6.0 months	0.70 (0.60, 0.82) ¹ p= 0.0001
153 Objective Response Rate(CR+PR)	137 (30%)	92 (20%)	1.71 (1.26, 2.32) ² p=0.0006
154 CR	34 (8%)	13 (3%)	2.75 (1.43, 5.29) ² p= 0.002

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160 ¹Hazard ratio
161 ²odds ratio
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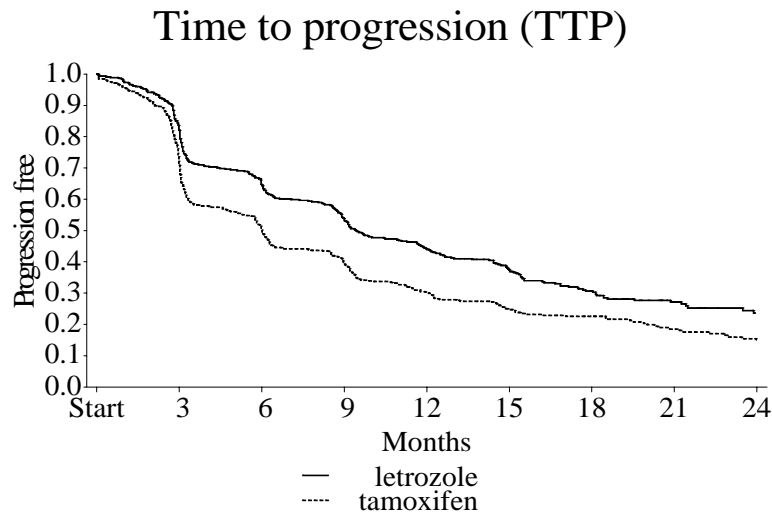
164 Figure 1 shows the Kaplan-Meier curves for TTP.

165
166 Table 3 shows results in the subgroup and women who had received prior antiestrogen
167 adjuvant therapy and Table 4 shows results by disease site.

168 (Note to Novartis: label this figure similarly to the figure following Table 6)

169
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Figure 1



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Table 3:
Efficacy in patients who received prior antiestrogen adjuvant therapy

	Femara 2.5 mg	tamoxifen 20 mg	p-value (2-sided)
	N = 84	N = 83	
Median Time To Progression	8.8 months	5.9 months	0.04 ¹
Objective Response Rate	29%	8%	0.002 ²
(CR + PR)			

¹Hazard ratio

²odds ratio

Table 4:
Efficacy by Disease Site

	Femara 2.5 mg N = 453	tamoxifen 20 mg N = 454	p-value (2-sided)
Dominant Disease Site			
Soft Tissue:	N = 113	N = 116	
Median TTP	12.9 months	6.4 months	0.05 ¹
Objective Response Rate	48%	35%	0.04²
Bone:	N = 146	N = 130	
Median TTP	9.7 months	6.2 months	0.01 ¹
Objective Response Rate	22%	14%	0.08 ²
Visceral:	N = 194	N = 208	
Median TTP	8.2 months	4.7 months	0.001 ¹
Objective Response Rate	26%	16%	0.02 ²

¹Hazard ratio

²odds ratio

Second-Line Breast Cancer:

Femara was initially studied at doses of 0.1 mg to 5.0 mg daily in six non-comparative phase I/II trials in 181 postmenopausal estrogen/progesterone receptor positive or unknown advanced breast cancer patients previously treated with at least antiestrogen therapy. Patients had received other hormonal therapies and also may have received cytotoxic therapy. Eight (20%) of forty patients treated with Femara 2.5 mg daily in phase I/II trials achieved an objective tumor response (complete or partial response).

Two large randomized controlled multinational (predominantly European) trials were conducted in patients with advanced breast cancer who had progressed despite antiestrogen therapy. Patients were randomized to Femara 0.5 mg daily, Femara 2.5 mg daily, or a comparator (megestrol acetate 160 mg daily in one study; and aminoglutethimide 250 mg bid with corticosteroid supplementation in the other study). In each study over 60% of the patients had received therapeutic antiestrogens, and about one-fifth of these patients had had an objective response. The megestrol acetate controlled study was double-blind; the other study was open label. Selected baseline characteristics for each study are shown in the following table:

Table 5: Selected Study Population Demographics

Parameter	megestrol acetate study	aminoglutethimide study
No. of Participants	552	557

238	Receptor Status		
239	ER/PR Positive	57%	56%
240	ER/PR Unknown	43%	44%
241			
242	Previous Therapy		
243	Adjuvant Only	33%	38%
244	Therapeutic +/- Adj.	66%	62%
245			
246	Sites of Disease		
247	Soft Tissue	56%	50%
248	Bone	50%	55%
249	Visceral	40%	44%
250			

251 Confirmed objective tumor response (complete response plus partial response) was the
 252 primary endpoint of the trials. Responses were measured according to the Union
 253 Internationale Contre le Cancer (UICC) criteria and verified by independent, blinded review.
 254 All responses were confirmed by a second evaluation 4-12 weeks after the documentation of
 255 the initial response.

256 The following table shows the results for the first trial, with a minimum follow-up of
 257 15 months, that compared Femara 0.5 mg, Femara 2.5 mg, and megestrol acetate 160 mg
 258 daily. (All analyses are unadjusted.)

259 **Table 6: Megestrol Acetate Study Results**

260		Femara 0.5 mg	Femara 2.5 mg	Megestrol Acetate
261		N = 188	N = 174	N = 190
262				
263	Objective Response (CR + PR)	22 (11.7%)	41 (23.6%)	31 (16.3%)
264				
265	Median Duration of Response	552 days	(Not reached)	561 days
266				
267	Median Time to Progression	154 days	170 days	168 days
268				
269	Median Survival	633 days	730 days	659 days
270				
271	Odds Ratio for Response	Femara 2.5 : Femara 0.5 = 2.33 (95% CI: 1.32, 4.17); p=0.004*		Femara 2.5: Megestrol = 1.58 (95% CI: 0.94, 2.66); p = 0.08*
272				
273				
274	Relative Risk of Progression	Femara 2.5: Femara 0.5 = 0.81 (95% CI: 0.63, 1.03); p = 0.09*		Femara 2.5: Megestrol = 0.77 (95% CI: 0.60, 0.98), p = 0.03*
275				
276				

277 *two-sided p-value

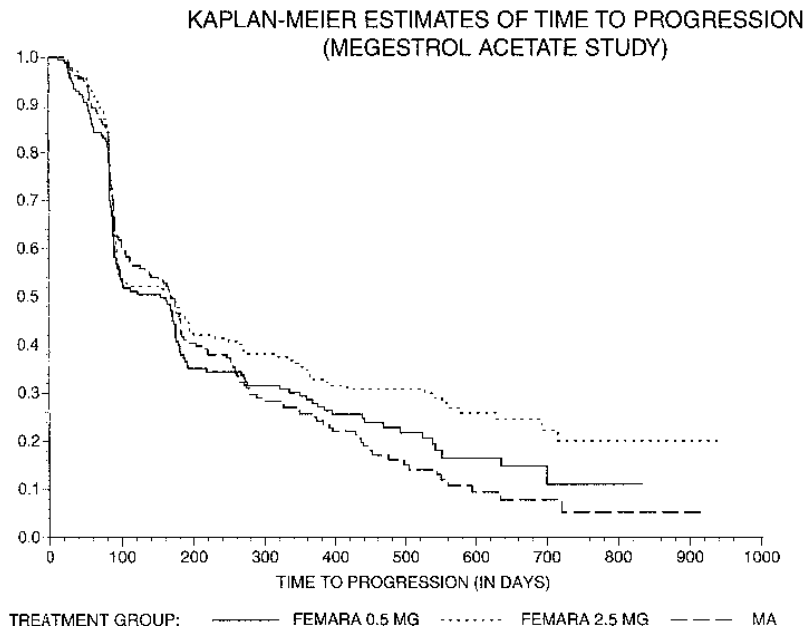
278

279 The Kaplan-Meier Curve for progression for the megestrol acetate study is shown below in
280 figure 2.

281

282

Figure 2



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284 The results for the study comparing Femara to aminoglutethimide, with a minimum follow-up
285 of nine months, are shown in the following table. (Unadjusted analyses are used).

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Table 7: Aminoglutethimide Study Results

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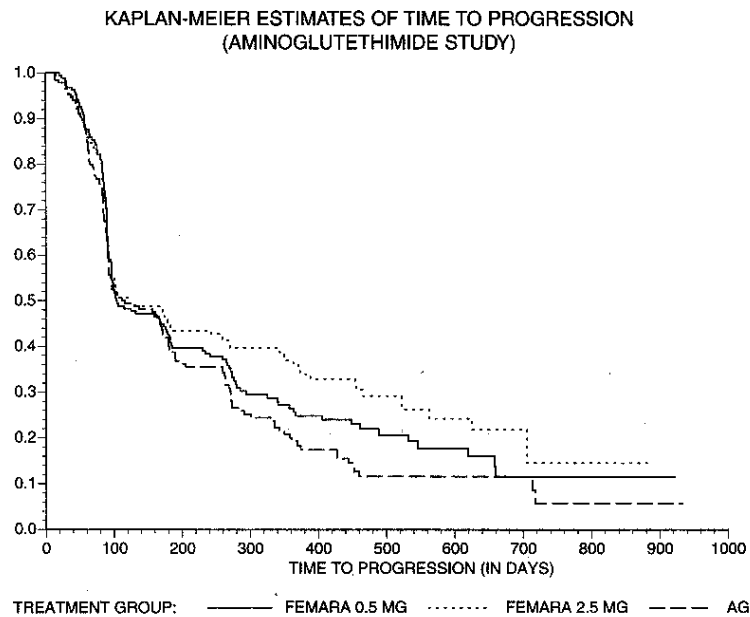
	Femara 0.5 N = 193	Femara 2.5 N = 185	Aminoglutethimide N = 179
Objective Response (CR + PR)	34 (17.6%)	34 (18.4%)	22 (12.3%)
Median Duration of Response	619 days	706 days	450 days
Median Time to Progression	103 days	123 days	112 days
Median Survival	636 days	792 days	592 days
Odds Ratio for Response	Femara 2.5 : Femara 0.5 =1.05 (95% CI: 0.62, 1.79); p=0.85*		Femara 2.5: Aminoglutethimide =1.61 (95% CI: 0.90, 2.87); p = 0.11*
Relative Risk of Progression	Femara 2.5: Femara 0.5 =0.86 (95% CI: 0.68, 1.11); p = 0.25*		Femara 2.5: Aminoglutethimide =0.74 (95% CI: 0.57, 0.94), p = 0.02*

305
306 *two-sided p-value
307

308 The Kaplan-Meier Curve for progression for the aminoglutethimide study is shown below in
309 figure 3.

310
311

Figure 3



312
313

314 INDICATIONS AND USAGE

315 Femara (letrozole tablets) is indicated for first-line treatment of postmenopausal women with
316 hormone receptor positive or hormone receptor unknown locally advanced or metastatic
317 breast cancer. Femara is also indicated for the treatment of advanced breast cancer in
318 postmenopausal women with disease progression following antiestrogen therapy.

319 CONTRAINDICATIONS

320 Femara is contraindicated in patients with known hypersensitivity to Femara or any of its
321 excipients.

322 **WARNINGS**

323 **Pregnancy**

324 Letrozole may cause fetal harm when administered to pregnant women. Studies in rats at
325 doses equal to or greater than 0.003 mg/kg (about 1/100 the daily maximum recommended
326 human dose on a mg/m² basis) administered during the period of organogenesis, have shown
327 that letrozole is embryotoxic and fetotoxic, as indicated by intrauterine mortality, increased
328 resorption, increased postimplantation loss, decreased numbers of live fetuses and fetal
329 anomalies including absence and shortening of renal papilla, dilation of ureter, edema and
330 incomplete ossification of frontal skull and metatarsals. Letrozole was teratogenic in rats. A
331 0.03 mg/kg dose (about 1/10 the daily maximum recommended human dose on a mg/m²
332 basis) caused fetal domed head and cervical/centrum vertebral fusion.

333 Letrozole is embryotoxic at doses equal to or greater than 0.002 mg/kg and fetotoxic when
334 administered to rabbits at 0.02 mg/kg (about 1/100,000 and 1/10,000 the daily maximum
335 recommended human dose on a mg/m² basis, respectively). Fetal anomalies included
336 incomplete ossification of the skull, sternebrae, and fore- and hindlegs.

337 There are no studies in pregnant women. Femara is indicated for post-menopausal women. If
338 there is exposure to letrozole during pregnancy, the patient should be apprised of the potential
339 hazard to the fetus and potential risk for loss of the pregnancy.

340 **PRECAUTIONS**

341 **Laboratory Tests**

342 No dose-related effect of Femara on any hematologic or clinical chemistry parameter was
343 evident. Moderate decreases in lymphocyte counts, of uncertain clinical significance, were
344 observed in some patients receiving Femara (letrozole tablets) 2.5 mg. This depression was
345 transient in about half of those affected. Two patients on Femara developed
346 thrombocytopenia; relationship to the study drug was unclear. Patient withdrawal due to
347 laboratory abnormalities, whether related to study treatment or not, was infrequent.

348 Increases in SGOT, SGPT, and gamma GT ≥ 5 times the upper limit of normal (ULN) and of
349 bilirubin ≥ 1.5 times the ULN were most often associated with metastatic disease in the liver.
350 About 3% of study participants receiving Femara had abnormalities in liver chemistries not
351 associated with documented metastases; these abnormalities may have been related to study
352 drug therapy. In the megestrol acetate comparative study about 8% of patients treated with
353 megestrol acetate had abnormalities in liver chemistries that were not associated with
354 documented liver metastases; in the aminoglutethimide study about 10% of
355 aminoglutethimide-treated patients had abnormalities in liver chemistries not associated with
356 hepatic metastases.

357 **Drug Interactions**

358 Clinical interaction studies with cimetidine and warfarin indicated that the coadministration of
359 Femara with these drugs does not result in clinically-significant drug interactions. (See
360 CLINICAL PHARMACOLOGY)

361 There is no clinical experience to date on the use of Femara in combination with other anti-
362 cancer agents.

363 **Drug/Laboratory Test-Interactions**

364 None observed.

365 **Carcinogenesis, Mutagenesis, Impairment of Fertility**

366 A conventional carcinogenesis study in mice at doses of 0.6 to 60 mg/kg/day (about one to
367 100 times the daily maximum recommended human dose on a mg/m² basis) administered by
368 oral gavage for up to 2 years revealed a dose-related increase in the incidence of benign
369 ovarian stromal tumors. The incidence of combined hepatocellular adenoma and carcinoma
370 showed a significant trend in females when the high dose group was excluded due to low
371 survival. In a separate study, plasma AUC_{0-12hr} levels in mice at 60 mg/kg/day were 55 times
372 higher than the AUC_{0-24hr} level in breast cancer patients at the recommended dose. The
373 carcinogenicity study in rats at oral doses of 0.1 to 10 mg/kg/day (about 0.4 to 40 times the
374 daily maximum recommended human dose on a mg/m² basis) for up to 2 years also produced
375 an increase in the incidence of benign ovarian stromal tumors at 10 mg/kg/day. Ovarian
376 hyperplasia was observed in females at doses equal to or greater than 0.1 mg/kg/day. At
377 10 mg/kg/day, plasma AUC_{0-24hr} levels in rats were 80 times higher than the level in breast
378 cancer patients at the recommended dose.

379 Letrozole was not mutagenic in *in vitro* tests (Ames and E.coli bacterial tests) but was
380 observed to be a potential clastogen in *in vitro* assays (CHO K1 and CCL 61 Chinese hamster
381 ovary cells). Letrozole was not clastogenic *in vivo* (micronucleus test in rats).

382 Studies to investigate the effect of letrozole on fertility have not been conducted; however,
383 repeated dosing caused sexual inactivity in females and atrophy of the reproductive tract in
384 males and females at doses of 0.6, 0.1 and 0.03 mg/kg in mice, rats and dogs, respectively
385 (about one, 0.4 and 0.4 the daily maximum recommended human dose on a mg/m² basis,
386 respectively).

387 **Pregnancy:** Pregnancy Category D (See WARNINGS).

388 **Nursing Mothers**

389 It is not known if letrozole is excreted in human milk. Because many drugs are excreted in
390 human milk, caution should be exercised when letrozole is administered to a nursing woman
391 (See WARNINGS AND PRECAUTIONS).

392 **Pediatric Use**

393 The safety and effectiveness in pediatric patients have not been established.

394 **Geriatric Use**

395 The median age of patients in the trial that compared Femara 2.5 mg daily to tamoxifen 20 mg
396 daily as first-line therapy was 65 years. About 1/3 of the patients were ≥ 70 years old. Femara
397 time to tumor progression and tumor response rate were better in patients ≥ 70 than in patients
398 < 70 years of age.

399 The mean age of patients in the two second-line randomized trials, that compared Femara (0.5
400 mg and 2.5 mg) to megestrol acetate and to aminoglutethimide, was 64 years. Thirty percent
401 of patients were ≥ 70 years old. The proportion of patients responding to each dose of Femara
402 was similar for women ≥ 70 years old and < 70 years old.

403 **ADVERSE REACTIONS**

404 Femara was generally well tolerated across all studies as first-line and second-line treatment
405 for breast cancer and adverse reaction rates were similar in both settings.

406 **First-line breast cancer:**

407 A total of 455 patients was treated for a median time of exposure of 11 months. The incidence
408 of adverse experiences was similar for Femara and tamoxifen. The most frequently reported
409 adverse experiences were bone pain, hot flushes, back pain, nausea, arthralgia and dyspnea.
410 Discontinuations for adverse experiences other than progression of tumor occurred in 10/455
411 (2%) of patients on Femara and in 15/455 (3%) of patients on tamoxifen.

412

413 Adverse events, regardless of relationship to study drug, that were reported in at least 5% of
414 the patients treated with Femara 2.5 mg or tamoxifen 20 mg in the first-line treatment study
415 are shown in the following table 8:

416 **Table 8: Percentage (%) of Patients with Adverse Events**

417 Adverse		
418 Experience	Femara	tamoxifen
419	2.5 mg	20 mg
420	(n=455)	(n=455)
421	%	%
422 <u>Body as a Whole</u>		
423 Fatigue	11	11
424 Chest pain	8	8
425 <u>Weight decreased</u>	6	4
426 Pain-not otherwise specified	5	6
427 <u>Weakness</u>	5	3
428		
429 <u>Cardiovascular</u>		
430 <u>Hot flushes</u>	18	15
431 Edema-lower limb	5	5
432 Hypertension	5	4
433 <u>Digestive System</u>		
434 Nausea	15	16
435 Constipation	9	9
436 Diarrhea	7	4
437 Vomiting	7	7
438 Appetite decreased	4	6
439 Pain-abdominal	4	5
440 <u>Infections/Infestations</u>		
441 Influenza	5	4
442 <u>Musculoskeletal System</u>		
443 Pain-bone	20	18
444 Pain-back	17	17
445 Arthralgia	14	13
446 Pain-limb	8	7
447 <u>Nervous System</u>		
448 Headache	8	7
449 Insomnia	6	4
450 <u>Reproductive</u>		
451 <u>Breast Pain</u>	5	6
452 <u>Respiratory System</u>		
453 Dyspnea	14	15
454 Coughing	11	10
455 <u>Skin and Appendages</u>		
456 <u>Alopecia/hair thinning</u>	5	4
457 <u>Surgical/Medical Procedures</u>		
458 <u>Post-mastectomy lymphoedema</u>	7	6

459 Other less frequent ($\leq 2\%$) adverse experiences considered consequential for both treatment
460 groups, included peripheral thromboembolic events, cardiovascular events, and
461 cerebrovascular events. Peripheral thromboembolic events included venous thrombosis,
462 thrombophlebitis, portal vein thrombosis and pulmonary embolism. Cardiovascular events
463 included angina, myocardial infarction, myocardial ischemia, and coronary heart disease.
464 Cerebrovascular events included transient ischemic attacks, thrombotic or hemorrhagic
465 strokes and development of hemiparesis.

466

467

468 **Second-line breast cancer:**

469 Femara (letrozole tablets) was generally well tolerated in two controlled clinical trials.

470 Study discontinuations in the megestrol acetate comparison study for adverse events other
471 than progression of tumor occurred in 5/188 (2.7%) of patients on Femara 0.5 mg, in 4/174
472 (2.3%) of the patients on Femara 2.5 mg, and in 15/190 (7.9%) of patients on megestrol
473 acetate. There were fewer thromboembolic events at both Femara doses than on the
474 megestrol acetate arm (2 of 362 patients or 0.6% vs. 9 of 190 patients or 4.7%). There was
475 also less vaginal bleeding (1 of 362 patients or 0.3% vs. 6 of 190 patients or 3.2%) on
476 letrozole than on megestrol acetate. In the aminoglutethimide comparison study,
477 discontinuations for reasons other than progression occurred in 6/193 (3.1%) of patients on
478 0.5 mg Femara, 7/185 (3.8%) of patients on 2.5 mg Femara, and 7/178 (3.9%) of patients on
479 aminoglutethimide.

480 Comparisons of the incidence of adverse events revealed no significant differences between
481 the high and low dose Femara groups in either study. Most of the adverse events observed in
482 all treatment groups were mild to moderate in severity and it was generally not possible to
483 distinguish adverse reactions due to treatment from the consequences of the patient's
484 metastatic breast cancer, the effects of estrogen deprivation, or intercurrent illness.

485 Adverse events, regardless of relationship to study drug, that were reported in at least 5% of
486 the patients treated with Femara 0.5 mg, Femara 2.5 mg, megestrol acetate, or
487 aminoglutethimide in the two controlled trials are shown in the following table 9:

488

Table 9: Percentage (%) of Patients with Adverse Events

Adverse Experience	Pooled Femara 2.5 mg (n=359) %	Pooled Femara 0.5 mg (n=380) %	Megestrol Acetate 160 mg (n=189) %	Aminoglutethimide 500 mg (n=178) %
<u>Body as a Whole</u>				
Fatigue	8	6	11	3
Chest pain	6	3	7	3
Peripheral edema ¹	5	5	8	3
Asthenia	4	5	4	5
Weight increase	2	2	9	3
<u>Cardiovascular</u>				
Hypertension	5	7	5	6
<u>Digestive System</u>				
Nausea	13	15	9	14
Vomiting	7	7	5	9
Constipation	6	7	9	7
Diarrhea	6	5	3	4
Pain-abdominal	6	5	9	8
Anorexia	5	3	5	5
Dyspepsia	3	4	6	5
<u>Infections/Infestations</u>				
Viral infection	6	5	6	3
<u>Lab Abnormality</u>				
Hypercholesterolemia	3	3	0	6
<u>Musculoskeletal System</u>				
Musculoskeletal ²	21	22	30	14
Arthralgia	8	8	8	3
<u>Nervous System</u>				
Headache	9	12	9	7
Somnolence	3	2	2	9
Dizziness	3	5	7	3
<u>Respiratory System</u>				
Dyspnea	7	9	16	5
Coughing	6	5	7	5
<u>Skin and Appendages</u>				
Hot flushes	6	5	4	3
Rash ³	5	4	3	12
Pruritus	1	2	5	3

¹ Includes peripheral edema, leg edema, dependent edema, edema

² Includes musculoskeletal pain, skeletal pain, back pain, arm pain, leg pain

³ Includes rash, erythematous rash, maculopapular rash, psoriaform rash, vesicular rash

534 Other less frequent (<5%) adverse experiences considered consequential and reported in at
535 least 3 patients treated with Femara, included hypercalcemia, fracture, depression, anxiety,
536 pleural effusion, alopecia, increased sweating and vertigo.

537 **OVERDOSAGE**

538 Isolated cases of Femara (letrozole tablets) overdose have been reported. In these instances,
539 the highest single dose ingested was 62.5 mg or 25 tablets. While no serious adverse events
540 were reported in these cases, because of the limited data available, no firm recommendations
541 for treatment can be made. However, emesis could be induced if the patient is alert. In
542 general, supportive care and frequent monitoring of vital signs are also appropriate. In single
543 dose studies the highest dose used was 30 mg, which was well tolerated; in multiple dose
544 trials, the largest dose of 10 mg was well tolerated.

545 Lethality was observed in mice and rats following single oral doses that were equal to or
546 greater than 2000 mg/kg (about 4000 to 8000 times the daily maximum recommended human
547 dose on a mg/m² basis); death was associated with reduced motor activity, ataxia and dyspnea.
548 Lethality was observed in cats following single IV doses that were equal to or greater than
549 10 mg/kg (about 50 times the daily maximum recommended human dose on a mg/m² basis);
550 death was preceded by depressed blood pressure and arrhythmias.

551 **DOSAGE & ADMINISTRATION**

552 **Adult and Elderly Patients**

553 The recommended dose of Femara (letrozole tablets) is one 2.5 mg tablet administered once a
554 day, without regard to meals. Treatment with Femara should continue until tumor progression
555 is evident. No dose adjustment is required for elderly patients. Patients treated with Femara
556 do not require glucocorticoid or mineralocorticoid replacement therapy.

557 **Renal Impairment**

558 (See CLINICAL PHARMACOLOGY.) No dosage adjustment is required for patients with
559 renal impairment if creatinine clearance is ≥ 10 mL/min.

560 **Hepatic Impairment**

561 (See CLINICAL PHARMACOLOGY.) Although letrozole blood concentrations were
562 modestly increased in subjects with moderate hepatic impairment due to cirrhosis, no dosage
563 adjustment is recommended for patients with mild-to-moderate hepatic impairment. Patients
564 with severe impairment of liver function have not been studied. Because letrozole is
565 eliminated almost exclusively by hepatic metabolism, patients with severe impairment of liver
566 function should be dosed with caution.

567 **HOW SUPPLIED**

568 2.5 mg tablets - dark yellow, film-coated, round, slightly biconvex, with beveled edges
569 (imprinted with the letters FV on one side and CG on the other side).

570 Packaged in HDPE bottles with a safety screw cap.

571 Bottles of 30 tablets.NDC 0078-0249-15

572 Store at 25°C (77°F); excursions permitted to 15°C-30°C(59°F-86°F) [see USP Controlled
573 Room Temperature].

574 REV: xxxx 2000

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577  **NOVARTIS**

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