

**ANNEX III**  
**SUMMARY OF PRODUCT CHARACTERISTICS,**  
**LABELLING AND PACKAGE LEAFLET**

**Note: This SPC, labelling and packages leaflet is the version valid at the time of Commission Decision.**

**After the Commission Decision the Member State Competent Authorities, in liaison with the Reference Member State, will update the product information as required. Therefore, this SPC, labelling and package leaflet may not necessarily represent the current text.**

## **SUMMARY OF PRODUCT CHARACTERISTICS**

## 1. NAME OF THE MEDICINAL PRODUCT

Arimidex and associated names (see Annex I) 1 mg film-coated tablets

## 2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Each film-coated tablet contains 1 mg anastrozole.

### Excipients

Each film-coated tablet contains 93 mg of lactose monohydrate (see section 4.4). For a full list of excipients, see section 6.1.

## 3. PHARMACEUTICAL FORM

Film-coated tablet.

White, round, biconvex tablet with logo on one side and strength on the other.

## 4. CLINICAL PARTICULARS

### 4.1 Therapeutic indications

Arimidex is indicated for the:

- Treatment of hormone receptor-positive advanced breast cancer in postmenopausal women.
- Adjuvant treatment of hormone receptor-positive early invasive breast cancer in postmenopausal women.
- Adjuvant treatment of hormone receptor-positive early invasive breast cancer in postmenopausal women who have received 2 to 3 years of adjuvant tamoxifen.

### 4.2 Posology and method of administration

#### Posology

The recommended dose of Arimidex for adults including the elderly is one 1 mg tablet once a day.

For postmenopausal women with hormone receptor-positive early invasive breast cancer, the recommended duration of adjuvant endocrine treatment is 5 years.

#### Special populations

##### *Paediatric population*

Arimidex is not recommended for use in children and adolescents due to insufficient data on safety and efficacy (see sections 4.4 and 5.1).

##### *Renal impairment*

No dose change is recommended in patients with mild or moderate renal impairment. In patients with severe renal impairment, administration of Arimidex should be performed with caution (see section 4.4 and 5.2).

##### *Hepatic impairment*

No dose change is recommended in patients with mild hepatic disease. Caution is advised in patients with moderate to severe hepatic impairment (see section 4.4).

## Method of administration

Arimidex should be taken orally.

### **4.3 Contraindications**

Arimidex is contraindicated in:

- Pregnant or breast-feeding women.
- Patients with known hypersensitivity to anastrozole or to any of the excipients as referenced in section 6.1.

### **4.4 Special warnings and precautions for use**

#### General

Arimidex should not be used in premenopausal women. The menopause should be defined biochemically (luteinizing-hormone [LH], follicle stimulating hormone [FSH], and/or estradiol levels) in any patient where there is doubt about menopausal status. There are no data to support the use of Arimidex with LHRH analogues.

Co-administration of tamoxifen or estrogen-containing therapies with Arimidex should be avoided as this may diminish its pharmacological action (see section 4.5 and 5.1).

#### Effect on bone mineral density

As Arimidex lowers circulating estrogen levels it may cause a reduction in bone mineral density with a possible consequent increased risk of fracture (see section 4.8).

Women with osteoporosis or at risk of osteoporosis, should have their bone mineral density formally assessed at the commencement of treatment and at regular intervals thereafter. Treatment or prophylaxis for osteoporosis should be initiated as appropriate and carefully monitored. The use of specific treatments, e.g., bisphosphonates, may stop further bone mineral loss caused by Arimidex in postmenopausal women and could be considered (see section 4.8).

#### Hepatic impairment

Arimidex has not been investigated in breast cancer patients with moderate or severe hepatic impairment. Exposure to anastrozole can be increased in subjects with hepatic impairment (see section 5.2); administration of Arimidex in patients with moderate and severe hepatic impairment should be performed with caution (see section 4.2). Treatment should be based on a benefit-risk evaluation for the individual patient.

#### Renal impairment

Arimidex has not been investigated in breast cancer patients with severe renal impairment. Exposure to anastrozole is not increased in subjects with severe renal impairment (GRF<30ml/min, see section 5.2); in patients with severe renal impairment, administration of Arimidex should be performed with caution (see section 4.2).

#### Paediatric population

Arimidex is not recommended for use in children and adolescents as safety and efficacy have not been established in this group of patients (see section 5.1).

Arimidex should not be used in boys with growth hormone deficiency in addition to growth hormone treatment. In the pivotal clinical trial, efficacy was not demonstrated and safety was not established (see

section 5.1). Since anastrozole reduces estradiol levels, Arimidex must not be used in girls with growth hormone deficiency in addition to growth hormone treatment. Long-term safety data in children and adolescents are not available.

#### Hypersensitivity to lactose

This product contains lactose. Patients with rare hereditary problems of galactose intolerance, the Lapp lactase deficiency or glucose-galactose malabsorption should not take this medicine.

### **4.5 Interaction with other medicinal products and other forms of interaction**

Anastrozole inhibits CYPs 1A2, 2C8/9 and 3A4 in vitro. Clinical studies with antipyrine and warfarin showed that anastrozole at a 1 mg dose did not significantly inhibit the metabolism of antipyrine and R- and S-warfarin indicating the co-administration of Arimidex with other medicinal products is unlikely to result in clinically significant medicinal product interactions mediated by CYP enzymes.

The enzymes mediating metabolism of anastrozole have not been identified. Cimetidine, a weak, unspecific inhibitor of CYP enzymes, did not affect the plasma concentrations of anastrozole. The effect of potent CYP inhibitors is unknown.

A review of the clinical trial safety database did not reveal evidence of clinically significant interaction in patients treated with Arimidex who also received other commonly prescribed medicinal products. There were no clinically significant interactions with bisphosphonates (see section 5.1).

Co-administration of tamoxifen or estrogen-containing therapies with Arimidex should be avoided as this may diminish its pharmacological action (see section 4.4 and 5.1).

### **4.6 Fertility, pregnancy and lactation**

#### Pregnancy

There are no data from the use of Arimidex in pregnant women. Studies in animals have shown reproductive toxicity (see section 5.3). Arimidex is contraindicated during pregnancy (see section 4.3).

#### Breast-feeding

There are no data on the use of Arimidex during lactation. Arimidex is contraindicated during breast-feeding (see section 4.3).

#### Fertility

The effects of Arimidex on fertility in humans have not been studied. Studies in animals have shown reproductive toxicity (see section 5.3).

### **4.7 Effects on ability to drive and use machines**

Arimidex has no or negligible influence on the ability to drive and use machines. However, asthenia and somnolence have been reported with the use of Arimidex and caution should be observed when driving or operating machinery while such symptoms persist.

## 4.8 Undesirable effects

The following table presents adverse reactions from clinical trials, post-marketing studies or spontaneous reports. Unless specified, the frequency categories were calculated from the number of adverse events reported in a large phase III study conducted in 9,366 postmenopausal women with operable breast cancer given adjuvant treatment for five years (the Arimidex, Tamoxifen, Alone or in Combination [ATAC] study).

Adverse reactions listed below are classified according to frequency and System Organ Class (SOC). Frequency groupings are defined according to the following convention: very common ( $\geq 1/10$ ), common ( $\geq 1/100$  to  $< 1/10$ ), uncommon ( $\geq 1/1,000$  to  $< 1/100$ ), rare ( $\geq 1/10,000$  to  $< 1/1,000$ ), and very rare ( $< 1/10,000$ ). The most frequently reported adverse reactions were headache, hot flushes, nausea, rash, arthralgia, joint stiffness, arthritis, and asthenia.

**Table 1 Adverse reactions by System Organ Class and frequency**

| Adverse reactions by SOC and frequency               |             |   |
|--|-------------|---|
| Metabolism and nutrition disorders                   | Common      | Anorexia<br>Hypercholesterolaemia   |
| Nervous system disorders                             | Very common | Headache  |
|  | Common      | Somnolence<br>Carpal Tunnel Syndrome*   |
| Vascular disorders                                   | Very common | Hot flushes   |
| Gastrointestinal disorders                           | Very common | Nausea  |
|  | Common      | Diarrhoea<br>Vomiting   |
| Hepatobiliary disorders                              | Common      | Increases in alkaline phosphatase, alanine aminotransferase and aspartate aminotransferase                                    |
|  | Uncommon    | Increases in gamma-GT and bilirubin<br>Hepatitis  |
| Skin and subcutaneous tissue disorders               | Very common | Rash  |
|  | Common      | Hair thinning (alopecia)<br>Allergic reactions  |
|  | Uncommon    | Urticaria   |
|  | Rare        | Erythema multiforme<br>Anaphylactoid reaction<br>Cutaneous vasculitis (including some reports of Henocho-Schönlein purpura)** |
|  | Very rare   | Stevens-Johnson syndrome<br>Angioedema  |
| Musculoskeletal and connective tissue disorders      | Very common | Arthralgia/joint stiffness<br>Arthritis<br>Osteoporosis   |
|  | Common      | Bone pain   |
|  | Uncommon    | Trigger finger  |
| Reproductive system and breast disorders             | Common      | Vaginal dryness<br>Vaginal bleeding ***   |
| General disorders and administration site conditions | Very common | Asthenia  |

\* Events of Carpal Tunnel Syndrome have been reported in patients receiving Arimidex treatment in clinical trials in greater numbers than those receiving treatment with tamoxifen. However, the majority of these events occurred in patients with identifiable risk factors for the development of the condition.

\*\* Since cutaneous vasculitis and Henocho-Schönlein purpura was not observed in ATAC, the frequency category for these events can be considered as 'Rare' ( $\geq 0.01\%$  and  $< 0.1\%$ ) based on the worst value of the point estimate.

\*\*\* Vaginal bleeding has been reported commonly, mainly in patients with advanced breast cancer during the first few weeks after changing from existing hormonal therapy to treatment with Arimidex. If bleeding persists, further evaluation should be considered.

The table below presents the frequency of pre-specified adverse events in the ATAC study after a median follow-up of 68 months, irrespective of causality, reported in patients receiving trial therapy and up to 14 days after cessation of trial therapy.

**Table 2 ATAC study pre-specified adverse events**

| <b>Adverse events</b>   | <b>Arimidex<br/>(N=3,092)</b> | <b>Tamoxifen<br/>(N=3,094)</b> |
|---|-------------------------------|--------------------------------|
| Hot flushes   | 1,104 (35.7%)                 | 1,264 (40.9%)                  |
| Joint pain/stiffness  | 1,100 (35.6%)                 | 911 (29.4%)                    |
| Mood disturbances   | 597 (19.3%)                   | 554 (17.9%)                    |
| Fatigue/asthenia  | 575 (18.6%)                   | 544 (17.6%)                    |
| Nausea and vomiting   | 393 (12.7%)                   | 384 (12.4%)                    |
| Fractures   | 315 (10.2%)                   | 209 (6.8%)                     |
| Fractures of the spine, hip, or wrist/Colles                        | 133 (4.3%)                    | 91 (2.9%)                      |
| Wrist/Colles fractures  | 67 (2.2%)                     | 50 (1.6%)                      |
| Spine fractures   | 43 (1.4%)                     | 22 (0.7%)                      |
| Hip fractures   | 28 (0.9%)                     | 26 (0.8%)                      |
| Cataracts   | 182 (5.9%)                    | 213 (6.9%)                     |
| Vaginal bleeding  | 167 (5.4%)                    | 317 (10.2%)                    |
| Ischaemic cardiovascular disease                                    | 127 (4.1%)                    | 104 (3.4%)                     |
| Angina pectoris   | 71 (2.3%)                     | 51 (1.6%)                      |
| Myocardial infarct  | 37 (1.2%)                     | 34 (1.1%)                      |
| Coronary artery disorder  | 25 (0.8%)                     | 23 (0.7%)                      |
| Myocardial ischaemia  | 22 (0.7%)                     | 14 (0.5%)                      |
| Vaginal discharge   | 109 (3.5%)                    | 408 (13.2%)                    |
| Any venous thromboembolic event                                     | 87 (2.8%)                     | 140 (4.5%)                     |
| Deep venous thromboembolic events including PE (pulmonary embolism) | 48 (1.6%)                     | 74 (2.4%)                      |
| Ischaemic cerebrovascular events                                    | 62 (2.0%)                     | 88 (2.8%)                      |
| Endometrial cancer  | 4 (0.2%)                      | 13 (0.6%)                      |

Fracture rates of 22 per 1,000 patient-years and 15 per 1,000 patient-years were observed for the Arimidex and tamoxifen groups, respectively, after a median follow-up of 68 months. The observed fracture rate for Arimidex is similar to the range reported in age-matched postmenopausal populations. The incidence of osteoporosis was 10.5% in patients treated with Arimidex and 7.3% in patients treated with tamoxifen.

It has not been determined whether the rates of fracture and osteoporosis seen in ATAC in patients on Arimidex treatment reflect a protective effect of tamoxifen, a specific effect of Arimidex, or both.

#### **4.9 Overdose**

There is limited clinical experience of accidental overdose. In animal studies, anastrozole demonstrated low acute toxicity. Clinical trials have been conducted with various dosages of Arimidex, up to 60 mg in a single dose given to healthy male volunteers and up to 10 mg daily given to postmenopausal women with advanced breast cancer; these dosages were well tolerated. A single dose of Arimidex that results in life-threatening symptoms has not been established. There is no specific antidote to overdose and treatment must be symptomatic.

In the management of an overdose, consideration should be given to the possibility that multiple agents may have been taken. Vomiting may be induced if the patient is alert. Dialysis may be helpful because Arimidex

is not highly protein bound. General supportive care, including frequent monitoring of vital signs and close observation of the patient, is indicated.

## 5. PHARMACOLOGICAL PROPERTIES

### 5.1 Pharmacodynamic properties

Pharmacotherapeutic group: Enzyme inhibitors, ATC code: L02B G03

#### Mechanism of action and pharmacodynamic effects

Arimidex is a potent and highly selective non-steroidal aromatase inhibitor. In postmenopausal women, estradiol is produced primarily from the conversion of androstenedione to estrone through the aromatase enzyme complex in peripheral tissues. Estrone is subsequently converted to estradiol. Reducing circulating estradiol levels has been shown to produce a beneficial effect in women with breast cancer. In postmenopausal women, Arimidex at a daily dose of 1 mg produced estradiol suppression of greater than 80% using a highly sensitive assay.

Arimidex does not possess any progestogenic, androgenic, or estrogenic activity.

Daily doses of Arimidex up to 10 mg do not have any effect on cortisol or aldosterone secretion, measured before or after standard adrenocorticotrophic hormone (ACTH) challenge testing. Corticoid supplements are therefore not needed.

#### Clinical efficacy and safety

##### Advanced breast cancer

###### *First-line therapy in postmenopausal women with advanced breast cancer*

Two double-blind, controlled clinical studies of similar design (Study 1033IL/0030 and Study 1033IL/0027) were conducted to assess the efficacy of Arimidex compared with tamoxifen as first-line therapy for hormone receptor-positive or hormone receptor-unknown locally advanced or metastatic breast cancer in postmenopausal women. A total of 1,021 patients were randomised to receive 1 mg of Arimidex once daily or 20 mg of tamoxifen once daily. The primary endpoints for both trials were time to tumour progression, objective tumour response rate, and safety.

For the primary endpoints, Study 1033IL/0030 showed that Arimidex had a statistically significant advantage over tamoxifen for time to tumour progression (Hazard ratio (HR) 1.42, 95% Confidence Interval (CI) [1.11, 1.82], Median time to progression 11.1 and 5.6 months for Arimidex and tamoxifen respectively,  $p=0.006$ ); objective tumour response rates were similar for Arimidex and tamoxifen. Study 1033IL/0027 showed that Arimidex and tamoxifen had similar objective tumour response rates and time to tumour progression. Results from the secondary endpoints were supportive of the results of the primary efficacy endpoints. There were too few deaths occurring across treatment groups of both trials to draw conclusions on overall survival differences.

###### *Second-line therapy in postmenopausal women with advanced breast cancer*

Arimidex was studied in two controlled clinical trials (Study 0004 and Study 0005) in postmenopausal women with advanced breast cancer who had disease progression following tamoxifen therapy for either advanced or early breast cancer. A total of 764 patients were randomised to receive either a single daily dose of 1 mg or 10 mg of Arimidex or megestrol acetate 40 mg four times a day. Time to progression and objective response rates were the primary efficacy variables. The rate of prolonged (more than 24 weeks) stable disease, the rate of progression, and survival were also calculated. In both studies there were no significant differences between treatment arms with respect to any of the efficacy parameters.



*Adjuvant treatment of early invasive breast cancer for hormone receptor-positive patients*

In a large phase III study conducted in 9,366 postmenopausal women with operable breast cancer treated for 5 years (see below), Arimidex was shown to be statistically superior to tamoxifen in disease-free survival. A greater magnitude of benefit was observed for disease free survival in favour of Arimidex versus tamoxifen for the prospectively defined hormone receptor-positive population.

**Table 3 ATAC endpoint summary: 5-year treatment completion analysis**

| Efficacy endpoints                               | Number of events (frequency)  |                        |   |                        |
|--|-------------------------------|------------------------|---|------------------------|
|  | Intention-to-treat population |                        | Hormone receptor-positive tumour status |                        |
|  | Arimidex<br>(N=3,125)         | Tamoxifen<br>(N=3,116) | Arimidex<br>(N=2,618)                   | Tamoxifen<br>(N=2,598) |
| <b>Disease-free survival<sup>a</sup></b>         | 575 (18.4)                    | 651 (20.9)             | 424 (16.2)                              | 497 (19.1)             |
| Hazard ratio                                     | 0.87                          |                        | 0.83                                    |                        |
| 2-sided 95% CI                                   | 0.78 to 0.97                  |                        | 0.73 to 0.94                            |                        |
| p-value  | 0.0127                        |                        | 0.0049                                  |                        |
| <b>Distant disease-free survival<sup>b</sup></b> | 500 (16.0)                    | 530 (17.0)             | 370 (14.1)                              | 394 (15.2)             |
| Hazard ratio                                     | 0.94                          |                        | 0.93                                    |                        |
| 2-sided 95% CI                                   | 0.83 to 1.06                  |                        | 0.80 to 1.07                            |                        |
| p-value  | 0.2850                        |                        | 0.2838                                  |                        |
| <b>Time to recurrence<sup>c</sup></b>            | 402 (12.9)                    | 498 (16.0)             | 282 (10.8)                              | 370 (14.2)             |
| Hazard ratio                                     | 0.79                          |                        | 0.74                                    |                        |
| 2-sided 95% CI                                   | 0.70 to 0.90                  |                        | 0.64 to 0.87                            |                        |
| p-value  | 0.0005                        |                        | 0.0002                                  |                        |
| <b>Time to distant recurrence<sup>d</sup></b>    | 324 (10.4)                    | 375 (12.0)             | 226 (8.6)                               | 265 (10.2)             |
| Hazard ratio                                     | 0.86                          |                        | 0.84                                    |                        |
| 2-sided 95% CI                                   | 0.74 to 0.99                  |                        | 0.70 to 1.00                            |                        |
| p-value  | 0.0427                        |                        | 0.0559                                  |                        |
| <b>Contralateral breast primary</b>              | 35 (1.1)                      | 59 (1.9)               | 26 (1.0)                                | 54 (2.1)               |
| Odds ratio                                       | 0.59                          |                        | 0.47                                    |                        |
| 2-sided 95% CI                                   | 0.39 to 0.89                  |                        | 0.30 to 0.76                            |                        |
| p-value  | 0.0131                        |                        | 0.0018                                  |                        |
| <b>Overall survival<sup>e</sup></b>              | 411 (13.2)                    | 420 (13.5)             | 296 (11.3)                              | 301 (11.6)             |
| Hazard ratio                                     | 0.97                          |                        | 0.97                                    |                        |
| 2-sided 95% CI                                   | 0.85 to 1.12                  |                        | 0.83 to 1.14                            |                        |
| p-value  | 0.7142                        |                        | 0.7339                                  |                        |

a Disease-free survival includes all recurrence events and is defined as the first occurrence of loco-regional recurrence, contralateral new breast cancer, distant recurrence or death (for any reason).

b Distant disease-free survival is defined as the first occurrence of distant recurrence or death (for any reason).

c Time to recurrence is defined as the first occurrence of loco-regional recurrence, contralateral new breast cancer, distant recurrence or death due to breast cancer.

d Time to distant recurrence is defined as the first occurrence of distant recurrence or death due to breast cancer.

e Number (%) of patients who had died.

The combination of Arimidex and tamoxifen did not demonstrate any efficacy benefits in comparison with tamoxifen in all patients as well as in the hormone receptor-positive population. This treatment arm was discontinued from the study.

With an updated follow-up at a median of 10 years, long term comparison of the treatment effects of Arimidex relative to tamoxifen were shown to be consistent with previous analyses.

Adjuvant treatment of early invasive breast cancer for hormone receptor-positive patients being treated with adjuvant tamoxifen

In a phase III trial (Austrian Breast and Colorectal Cancer Study Group [ABCSG] 8) conducted in 2,579 postmenopausal women with hormone receptor-positive early breast cancer who had received surgery with or without radiotherapy and no chemotherapy (see below), switching to Arimidex after 2 years adjuvant treatment with tamoxifen was statistically superior in disease-free survival when compared to remaining on tamoxifen, after a median follow-up of 24 months.

**Table 4 ABCSG 8 trial endpoint and results summary**

| Efficacy endpoints                     | Number of events (frequency) |                        |
|--|------------------------------|------------------------|
|  | Arimidex<br>(N=1,297)        | Tamoxifen<br>(N=1,282) |
| <b>Disease-free survival</b>           | 65 (5.0)                     | 93 (7.3)               |
| Hazard ratio                           | 0.67                         |                        |
| 2-sided 95% CI                         | 0.49 to 0.92                 |                        |
| p-value                                | 0.014                        |                        |
| <b>Time to any recurrence</b>          | 36 (2.8)                     | 66 (5.1)               |
| Hazard ratio                           | 0.53                         |                        |
| 2-sided 95% CI                         | 0.35 to 0.79                 |                        |
| p-value                                | 0.002                        |                        |
| <b>Time to distant recurrence</b>      | 22 (1.7)                     | 41 (3.2)               |
| Hazard ratio                           | 0.52                         |                        |
| 2-sided 95% CI                         | 0.31 to 0.88                 |                        |
| p-value                                | 0.015                        |                        |
| <b>New contralateral breast cancer</b> | 7 (0.5)                      | 15 (1.2)               |
| Odds ratio                             | 0.46                         |                        |
| 2-sided 95% CI                         | 0.19 to 1.13                 |                        |
| p-value                                | 0.090                        |                        |
| <b>Overall survival</b>                | 43 (3.3)                     | 45 (3.5)               |
| Hazard ratio                           | 0.96                         |                        |
| 2-sided 95% CI                         | 0.63 to 1.46                 |                        |
| p-value                                | 0.840                        |                        |

Two further similar trials (GABG/ARNO 95 and ITA), in one of which patients had received surgery and chemotherapy, as well as a combined analysis of ABCSG 8 and GABG/ARNO 95, supported these results.

The Arimidex safety profile in these 3 studies was consistent with the known safety profile established in postmenopausal women with hormone receptor-positive early breast cancer.

Bone mineral density (BMD)

In the phase III/IV study (Study of Anastrozole with the Bisphosphonate Risedronate [SABRE]), 234 postmenopausal women with hormone receptor-positive early breast cancer scheduled for treatment with Arimidex 1 mg/day were stratified to low, moderate and high risk groups according to their existing risk of fragility fracture. The primary efficacy parameter was the analysis of lumbar spine bone mass density using DEXA scanning. All patients received treatment with vitamin D and calcium. Patients in the low risk group received Arimidex alone (N=42), those in the moderate group were randomised to Arimidex plus risedronate 35 mg once a week (N=77) or Arimidex plus placebo (N=77) and those in the high risk group received Arimidex plus risedronate 35 mg once a week (N=38). The primary endpoint was change from baseline in lumbar spine bone mass density at 12 months.

The 12-month main analysis has shown that patients already at moderate to high risk of fragility fracture showed no decrease in their bone mass density (assessed by lumbar spine bone mineral density using DEXA scanning) when managed by using Arimidex 1 mg/day in combination with risedronate 35 mg once a week.

In addition, a decrease in BMD which was not statistically significant was seen in the low risk group treated with Arimidex 1 mg/day alone. These findings were mirrored in the secondary efficacy variable of change from baseline in total hip BMD at 12 months.

This study provides evidence that the use of bisphosphonates could be considered in the management of possible bone mineral loss in postmenopausal women with early breast cancer scheduled to be treated with Arimidex.

### Paediatric population

Arimidex is not indicated for use in children and adolescents. Efficacy has not been established in the paediatric populations studied (see below). The number of children treated was too limited to draw any reliable conclusions on safety. No data on the potential long-term effects of Arimidex treatment in children and adolescents are available (see also section 5.3).

The European Medicines Agency has waived the obligation to submit the results of studies with Arimidex in one or several subsets of the paediatric population in short stature due to growth hormone deficiency (GHD), testotoxicosis, gynaecomastia, and McCune-Albright syndrome (see section 4.2).

#### *Short stature due to Growth Hormone Deficiency*

A randomised, double-blind, multi-centre study evaluated 52 pubertal boys (aged 11 to 16 years inclusive) with GHD treated for 12 to 36 months with Arimidex 1 mg/day or placebo in combination with growth hormone. Only 14 subjects on Arimidex completed 36 months.

No statistically significant difference from placebo was observed for the growth related parameters of predicted adult height, height, height SDS (standard deviation score), and height velocity. Final height data were not available. While the number of children treated was too limited to draw any reliable conclusions on safety, there was an increased fracture rate and a trend towards reduced bone mineral density in the Arimidex arm compared to placebo.

#### *Testotoxicosis*

An open-label, non-comparative, multi-centre study evaluated 14 male patients (aged 2 to 9 years) with familial male-limited precocious puberty, also known as testotoxicosis, treated with combination of Arimidex and bicalutamide. The primary objective was to assess the efficacy and safety of this combination regimen over 12 months. Thirteen out of the 14 patients enrolled completed 12 months of combination treatment (one patient was lost to follow-up). There was no significant difference in growth rate after 12 months of treatment, relative to the growth rate during the 6 months prior to entering the study.

#### *Gynaecomastia studies*

Trial 0006 was a randomised, double-blind, multi-centre study of 82 pubertal boys (aged 11-18 years inclusive) with gynaecomastia of greater than 12 months duration treated with Arimidex 1 mg/day or placebo daily for up to 6 months. No significant difference in the number of patients who had a 50% or greater reduction in total breast volume after 6 months of treatment was observed between the Arimidex 1 mg treated group and the placebo group.

Trial 0001 was an open-label, multiple-dose pharmacokinetic study of Arimidex 1 mg/day in 36 pubertal boys with gynaecomastia of less than 12 months duration. The secondary objectives were to evaluate the proportion of patients with reductions from baseline in the calculated volume of gynaecomastia of both breasts combined of at least 50% between day 1 and after 6 months of study treatment, and patient tolerability and safety. A decrease in 50% or more of total breast volume was seen in 56% (20/36) of the boys after 6 months.

#### *McCune-Albright Syndrome study*

Trial 0046 was an international, multi-centre, open-label exploratory trial of Arimidex in 28 girls (aged 2 to ≤ 10 years) with McCune-Albright Syndrome (MAS). The primary objective was to evaluate the safety and efficacy of Arimidex 1 mg/day in patients with MAS. The efficacy of study treatment was based on the proportion of patients fulfilling defined criteria relating to vaginal bleeding, bone age, and growth velocity.

No statistically significant change in the frequency of vaginal bleeding days on treatment was observed. There were no clinically significant changes in Tanner staging, mean ovarian volume, or mean uterine volume. No statistically significant change in the rate of increase in bone age on treatment compared to the rate during baseline was observed. Growth rate (in cm/year) was significantly reduced ( $p < 0.05$ ) from pre-treatment through month 0 to month 12, and from pre-treatment to the second 6 months (month 7 to month 12).

## 5.2 Pharmacokinetic properties

Absorption of anastrozole is rapid and maximum plasma concentrations typically occur within two hours of dosing (under fasted conditions). Food slightly decreases the rate but not the extent of absorption. The small change in the rate of absorption is not expected to result in a clinically significant effect on steady-state plasma concentrations during once daily dosing of Arimidex tablets. Approximately 90 to 95% of plasma anastrozole steady-state concentrations are attained after 7 daily doses, and accumulation is 3- to 4-fold. There is no evidence of time or dose-dependency of anastrozole pharmacokinetic parameters.

Anastrozole pharmacokinetics are independent of age in postmenopausal women.

Anastrozole is only 40% bound to plasma proteins.

Anastrozole is eliminated slowly with a plasma elimination half-life of 40 to 50 hours. Anastrozole is extensively metabolised by postmenopausal women with less than 10% of the dose excreted in the urine unchanged within 72 hours of dosing. Metabolism of anastrozole occurs by N-dealkylation, hydroxylation and glucuronidation. The metabolites are excreted primarily via the urine. Triazole, the major metabolite in plasma, does not inhibit aromatase.

### Renal or hepatic impairment

The apparent clearance (CL/F) of anastrozole, following oral administration, was approximately 30% lower in volunteers with stable hepatic cirrhosis than in matched controls (Study 1033IL/0014). However, plasma anastrozole concentrations in the volunteers with hepatic cirrhosis were within the range of concentrations seen in normal subjects in other trials. Plasma anastrozole concentrations observed during long-term efficacy trials in patients with hepatic impairment were within the range of plasma anastrozole concentrations seen in patients without hepatic impairment.

The apparent clearance (CL/F) of anastrozole, following oral administration, was not altered in volunteers with severe renal impairment (GFR  $< 30$  ml/min) in Study 1033IL/0018, consistent with the fact that anastrozole is eliminated primarily by metabolism. Plasma anastrozole concentrations observed during long-term efficacy trials in patients with renal impairment were within the range of plasma anastrozole concentrations seen in patients without renal impairment. In patients with severe renal impairment, administration of Arimidex should be performed with caution (see section 4.2 and 4.4).

### Paediatric population

In boys with pubertal gynaecomastia (10-17 years), anastrozole was rapidly absorbed, was widely distributed, and was eliminated slowly with a half-life of approximately 2 days. Clearance of anastrozole was lower in girls (3-10 years) than in the older boys and exposure higher. Anastrozole in girls was widely distributed and slowly eliminated.

## 5.3 Preclinical safety data

Non-clinical data reveal no special hazard for humans based on conventional studies of safety pharmacology, repeated dose toxicity, genotoxicity, carcinogenic potential, toxicity to reproduction for the indicated population.

### Acute toxicity

In animal studies toxicity was only seen at high doses. In acute toxicity studies in rodents, the median lethal dose of anastrozole was greater than 100 mg/kg/day by the oral route and greater than 50 mg/kg/day by the intraperitoneal route. In an oral acute toxicity study in the dog, the median lethal dose was greater than 45 mg/kg/day.

### Chronic toxicity

In animal studies adverse effects were only seen at high doses. Multiple dose toxicity studies utilized rats and dogs. No no-effect levels were established for anastrozole in the toxicity studies, but those effects that were observed at the low doses (1 mg/kg/day) and mid doses (dog 3 mg/kg/day; rat 5 mg/kg/day) were related to either the pharmacological or enzyme inducing properties of anastrozole and were unaccompanied by significant toxic or degenerative changes.

### Mutagenicity

Genetic toxicology studies with anastrozole show that it is not a mutagen or a clastogen.

### Reproductive toxicology

In a fertility study weanling male rats were dosed orally with 50 or 400 mg/l anastrozole via their drinking water for 10 weeks. Measured mean plasma concentrations were 44.4 ( $\pm$ 14.7) ng/ml and 165 ( $\pm$ 90) ng/ml respectively. Mating indices were adversely affected in both dose groups, whilst a reduction in fertility was evident only at the 400 mg/l dose level. The reduction was transient as all mating and fertility parameters were similar to control group values following a 9 week treatment-free recovery period.

Oral administration of anastrozole to female rats produced a high incidence of infertility at 1 mg/kg/day and increased pre-implantation loss at 0.02 mg/kg/day. These effects occurred at clinically relevant doses. An effect in man cannot be excluded. These effects were related to the pharmacology of the compound and were completely reversed after a 5-week compound withdrawal period.

Oral administration of anastrozole to pregnant rats and rabbits caused no teratogenic effects at doses up to 1.0 and 0.2 mg/kg/day respectively. Those effects that were seen (placental enlargement in rats and pregnancy failure in rabbits) were related to the pharmacology of the compound.

The survival of litters born to rats given anastrozole at 0.02 mg/kg/day and above (from Day 17 of pregnancy to Day 22 post-partum) was compromised. These effects were related to the pharmacological effects of the compound on parturition. There were no adverse effects on behaviour or reproductive performance of the first generation offspring attributable to maternal treatment with anastrozole.

### Carcinogenicity

A two-year rat oncogenicity study resulted in an increase in incidence of hepatic neoplasms and uterine stromal polyps in females and thyroid adenomas in males at the high dose (25 mg/kg/day) only. These changes occurred at a dose which represents 100-fold greater exposure than occurs at human therapeutic doses, and are considered not to be clinically relevant to the treatment of patients with anastrozole.

A two-year mouse oncogenicity study resulted in the induction of benign ovarian tumours and a disturbance in the incidence of lymphoreticular neoplasms (fewer histiocytic sarcomas in females and more deaths as a result of lymphomas). These changes are considered to be mouse-specific effects of aromatase inhibition and not clinically relevant to the treatment of patients with anastrozole.

## **6. PHARMACEUTICAL PARTICULARS**

### **6.1 List of excipients**

Lactose monohydrate  
Povidone  
Sodium starch glycollate  
Magnesium stearate  
Hypromellose  
Macrogol 300  
Titanium dioxide

### **6.2 Incompatibilities**

Not applicable.

### **6.3 Shelf life**

5 years.

### **6.4 Special precautions for storage**

Do not store above 30°C.

### **6.5 Nature and contents of container**

[To be completed nationally]

### **6.6 Special precautions for disposal**

Any unused product or waste material should be disposed of in accordance with local requirements.

## **7. MARKETING AUTHORISATION HOLDER**

[See Annex I - To be completed nationally]

{Name and address}

{tel}

{fax}

{e-mail}

## **8. MARKETING AUTHORISATION NUMBER(S)**

[To be completed nationally]

## **9. DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION**

[To be completed nationally]

## **10. DATE OF REVISION OF THE TEXT**

[To be completed nationally]

## **LABELLING**

**PARTICULARS TO APPEAR ON THE OUTER PACKAGING AND THE IMMEDIATE PACKAGING**

**CARTON**

**1. NAME OF THE MEDICINAL PRODUCT**

Arimidex and associated names (see Annex I) 1 mg film-coated tablets  
[See Annex I - To be completed nationally]

anastrozole

**2. STATEMENT OF ACTIVE SUBSTANCE(S)**

Each film-coated tablet contains 1 mg anastrozole.

**3. LIST OF EXCIPIENTS**

Contains lactose. See leaflet for further information.

**4. PHARMACEUTICAL FORM AND CONTENTS**

Film-coated tablet.

**5. METHOD AND ROUTE(S) OF ADMINISTRATION**

Read the package leaflet before use.

Oral use.

**6. SPECIAL WARNING THAT THE MEDICINAL PRODUCT MUST BE STORED OUT OF THE REACH AND SIGHT OF CHILDREN**

Keep out of the reach and sight of children.

**7. OTHER SPECIAL WARNING(S), IF NECESSARY**

**8. EXPIRY DATE**

EXP

**9. SPECIAL STORAGE CONDITIONS**

Do not store above 30°C.



**10. SPECIAL PRECAUTIONS FOR DISPOSAL OF UNUSED MEDICINAL PRODUCTS OR WASTE MATERIALS DERIVED FROM SUCH MEDICINAL PRODUCTS, IF APPROPRIATE**

**11. NAME AND ADDRESS OF THE MARKETING AUTHORISATION HOLDER**

[See Annex I - To be completed nationally]

**12. MARKETING AUTHORISATION NUMBER(S)**

[To be completed nationally]

**13. BATCH NUMBER**

Lot

**14. GENERAL CLASSIFICATION FOR SUPPLY**

Medicinal product subject to medical prescription.

**15. INSTRUCTIONS ON USE**

[To be completed nationally]

**16. INFORMATION IN BRAILLE**

[To be completed nationally]

**MINIMUM PARTICULARS TO APPEAR ON BLISTERS OR STRIPS**

**BLISTER**

**1. NAME OF THE MEDICINAL PRODUCT**

Arimidex and associated names (see Annex I) 1 mg film-coated tablets

[See Annex I - To be completed nationally]

anastrozole

**2. NAME OF THE MARKETING AUTHORISATION HOLDER**

[See Annex I - To be completed nationally]

**3. EXPIRY DATE**

EXP

**4. BATCH NUMBER**

Lot

**5. OTHER**

**PACKAGE LEAFLET**

## PACKAGE LEAFLET: INFORMATION FOR THE USER

### **Arimidex and associated names (see Annex I) 1 mg film-coated tablets**

[See Annex I - To be completed nationally]  
anastrozole

#### **Read all of this leaflet carefully before you start taking this medicine.**

- Keep this leaflet. You may need to read it again.
- If you have any further questions, ask your doctor or pharmacist.
- This medicine has been prescribed for you. Do not pass it on to others. It may harm them, even if their symptoms are the same as yours.
- If any of the side effects gets serious, or if you notice any side effects not listed in this leaflet, please tell your doctor or pharmacist.

#### **In this leaflet:**

1. What Arimidex is and what it is used for
2. Before you take Arimidex
3. How to take Arimidex
4. Possible side effects
5. How to store Arimidex
6. Further information

### **1. WHAT ARIMIDEX IS AND WHAT IT IS USED FOR**

Arimidex contains a substance called anastrozole. This belongs to a group of medicines called ‘aromatase inhibitors’. Arimidex is used to treat breast cancer in women who have gone through the menopause.

Arimidex works by cutting down the amount of the hormone called estrogen that your body makes. It does this by blocking a natural substance (an enzyme) in your body called ‘aromatase’.

### **2. BEFORE YOU TAKE ARIMIDEX**

#### **Do not take Arimidex**

- if you are allergic (hypersensitive) to anastrozole or any of the other ingredients of Arimidex (see section 6: Further information).
- if you are pregnant or breast-feeding (see the section called ‘Pregnancy and breast-feeding’).

Do not take Arimidex if any of the above apply to you. If you are not sure, talk to your doctor or pharmacist before taking Arimidex.

#### **Take special care with Arimidex**

Before treatment with Arimidex check with your doctor or pharmacist

- if you still have menstrual periods and have not yet gone through the menopause.
- if you are taking a medicine that contains tamoxifen or medicines that contain estrogen (see the section called ‘Taking other medicines’).
- if you have ever had a condition that affects the strength of your bones (osteoporosis).
- if you have problems with your liver or kidneys.

If you are not sure if any of the above applies to you, talk to your doctor or pharmacist before taking Arimidex.

If you go into the hospital, let the medical staff know you are taking Arimidex.

### **Taking other medicines**

Please tell your doctor or pharmacist if you are taking or have recently taken any other medicines, including medicines obtained without a prescription. This includes medicines that you buy without a prescription and herbal medicines. This is because Arimidex can affect the way some medicines work and some medicines can have an effect on Arimidex.

Do not take Arimidex if you are already taking any of the following medicines:

- Certain medicines used to treat breast cancer (selective estrogen receptor modulators), e.g., medicines that contain tamoxifen. This is because these medicines may stop Arimidex from working properly.
- Medicines that contain estrogen, such as hormone replacement therapy (HRT).

If this applies to you, ask your doctor or pharmacist for advice.

Tell your doctor or pharmacist if you are taking the following:

- A medicine known as an ‘LHRH analogue’. This includes gonadorelin, buserelin, goserelin, leuprorelin and triptorelin. These medicines are used to treat breast cancer, certain female health (gynaecological) conditions, and infertility.

### **Pregnancy and breast-feeding**

Do not take Arimidex if you are pregnant or breast-feeding. Stop Arimidex if you become pregnant and talk to your doctor.

Ask your doctor or pharmacist for advice before taking any medicine.

### **Driving and using machines**

Arimidex is not likely to affect your ability to drive or use any tools or machines. However, some people may occasionally feel weak or sleepy while taking Arimidex. If this happens to you, ask your doctor or pharmacist for advice.

### **Important information about some of the ingredients of Arimidex**

Arimidex contains lactose which is a type of sugar. If you have been told by your doctor that you have an intolerance to some sugars, contact your doctor before taking this medicine.

## **3. HOW TO TAKE ARIMIDEX**

Always take Arimidex exactly as your doctor has told you. You should check with your doctor or pharmacist if you are not sure.

- The usual dose is one tablet once a day.
- Try to take your tablet at the same time each day.
- Swallow the tablet whole with a drink of water.
- It does not matter if you take Arimidex before, with or after food.

Keep taking Arimidex for as long as your doctor tells you to. It is a long-term treatment and you may need to take it for several years.

### **Use in children**

Arimidex should not be given to children and adolescents.

### **If you take more Arimidex than you should**

If you take more Arimidex than you should, talk to a doctor straight away.

### **If you forget to take Arimidex**

If you forget to take a dose, just take your next dose as normal.

Do not take a double dose (two doses at the same time) to make up for a forgotten dose.

**If you stop taking Arimidex**

Do not stop taking your tablets unless your doctor tells you to.

If you have any further questions on the use of this medicine, ask your doctor or pharmacist.

**4. POSSIBLE SIDE EFFECTS**

Like all medicines, Arimidex can cause side effects, although not everybody gets them.

**Very common side effects (affect more than 1 in 10 people)**

- Headache.
- Hot flushes.
- Feeling sick (nausea).
- Skin rash.
- Pain or stiffness in your joints.
- Inflammation of the joints (arthritis).
- Feeling weak.
- Bone loss (osteoporosis).

**Common side effects (affect 1 to 10 people in 100)**

- Loss of appetite.
- Raised or high levels of a fatty substance known as cholesterol in your blood. This would be seen in a blood test.
- Feeling sleepy.
- Carpal tunnel syndrome (tingling, pain, coldness, weakness in parts of the hand).
- Diarrhoea.
- Being sick (vomiting).
- Changes in blood tests that show how well your liver is working.
- Thinning of your hair (hair loss).
- Allergic (hypersensitivity) reactions including face, lips, or tongue.
- Bone pain.
- Vaginal dryness.
- Bleeding from the vagina (usually in the first few weeks of treatment – if the bleeding continues, talk to your doctor).

**Uncommon side effects (affect 1 to 10 people in 1,000)**

- Changes in special blood tests that show how your liver is working (gamma-GT and bilirubin).
- Inflammation of the liver (hepatitis).
- Hives or nettle rash.
- Trigger finger (a condition in which your finger or thumb catches in a bent position).

**Rare side effects (affect 1 to 10 people in 10,000)**

- Rare inflammation of your skin that may include red patches or blisters.
- Skin rash caused by hypersensitivity (this can be from allergic or anaphylactoid reaction).
- Inflammation of the small blood vessels causing red or purple colouring of the skin. Very rarely symptoms of joint, stomach, and kidney pain may occur; this is known as ‘Henoch-Schönlein purpura’.

**Very rare side effects (affect less than 1 person in 10,000 people)**

- An extremely severe skin reaction with ulcers or blisters on the skin. This is known as ‘Stevens-Johnson syndrome’.
- Allergic (hypersensitivity) reactions with swelling of the throat that may cause difficulty in swallowing or breathing. This is known as ‘angioedema’.

If any of these happen to you, call an ambulance or see a doctor straight away - you may need urgent medical treatment.

**Effects on your bones**

Arimidex lowers the amount of the hormone called estrogen that is in your body. This may lower the mineral content of your bones. Your bones may be less strong and may be more likely to fracture. Your doctor will manage these risks according to treatment guidelines for managing bone health in women who have gone through the menopause. You should talk to your doctor about the risks and treatment options.

If any of the side effects get serious, or if you notice any side effects not listed in this leaflet, please tell your doctor or pharmacist.

**5. HOW TO STORE ARIMIDEX**

Keep out of the reach and sight of children. Keep your tablets in a safe place where children cannot see or reach them. Your tablets could harm them.

Do not use Arimidex after the expiry date which is stated on the carton and <container> [To be completed nationally]. The expiry date refers to the last day of that month.

Keep your tablets in the container they came in.

Medicines should not be disposed of via wastewater or household waste. Ask your pharmacist how to dispose of medicines no longer required. These measures will help to protect the environment.

**6. FURTHER INFORMATION****What Arimidex contains**

- The active substance is anastrozole. Each film-coated tablet contains 1 mg of anastrozole.
- The other ingredients are: lactose monohydrate, povidone, sodium starch glycollate, magnesium stearate, hypromellose, macrogol 300, titanium dioxide.

**What Arimidex looks like and contents of the pack**

White, round, biconvex tablet with logo on one side and strength on the other.

[To be completed nationally]

**Marketing Authorisation Holder**

[See Annex I - To be completed nationally]

{Name and address}

{tel}

{fax}

{e-mail}

**Manufacturer**

AstraZeneca UK Ltd, Silk Road Business Park, Macclesfield, Cheshire, SK10 2NA, United Kingdom

Batch release sites

AstraZeneca UK Ltd  
Silk Road Business Park  
Macclesfield  
Cheshire SK10 2NA  
United Kingdom

AstraZeneca  
Parc Industriel Pompelle  
Chemin de Vrilly  
Box 1050  
51689 Reims Cedex  
France

AstraZeneca GmbH  
Tinsdaler Weg 183  
D-22880 Wedel  
Germany

Brecon Pharmaceuticals Ltd  
Forest Road  
Hay-on-Wye  
Herefordshire  
HR3 5EH  
United Kingdom

**This medicinal product is authorised in the Member States of the EEA under the following names:**

[See Annex I - To be completed nationally]

**This leaflet was last approved in {MM/YYYY}.**

[To be completed nationally]

Detailed information on this medicine is available on the web site of {MA/Agency}