

FASENRA

benralizumab

Pre-filled Pen

1. NAME OF THE MEDICINAL PRODUCT

Fasenra 30 mg solution for injection in pre-filled pen

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Pre-filled pen

Each pre-filled pen contains 30 mg benralizumab* in 1 mL.

*Benralizumab is a humanised monoclonal antibody produced in Chinese hamster ovary (CHO) cells by recombinant DNA technology.

For the full list of excipients, see section 6.1.

3. PHARMACEUTICAL FORM

Solution for injection in pre-filled pen (injection)

Clear to opalescent, colourless to yellow solution and may contain translucent or white to off-white particles.

4. CLINICAL PARTICULARS

4.1 Therapeutic indication

Fasenra is indicated as an add-on maintenance treatment in adult patients with severe eosinophilic asthma (blood eosinophilic count ≥ 300 cells/ μ L or ≥ 150 cells/ μ L if on oral corticosteroid treatment) inadequately controlled despite high-dose inhaled corticosteroids plus long-acting β -agonists.

4.2 Posology and method of administration

Fasenra treatment should be initiated by a physician experienced in the diagnosis and treatment of severe asthma.

After proper training in the subcutaneous injection technique and education about signs and symptoms of hypersensitivity reactions (see section 4.4), patients with no known history of anaphylaxis or their caregivers may administer Fasenra if their physician determines that it is appropriate, with medical follow-up as necessary. Self-administration should only be considered in patients already experienced with Fasenra treatment.

Posology

The recommended dose of benralizumab is 30 mg by subcutaneous injection every 4 weeks for the first 3 doses, and then every 8 weeks thereafter. If an injection is missed on the planned date, dosing should resume as soon as possible on the indicated regimen; a double dose must not be administered. Fasenra is intended for long-term treatment. A decision to continue the therapy should be made at least annually based on disease severity, level of exacerbation control and blood eosinophil counts.

Elderly

No dose adjustment is required for elderly patients (see section 5.2).

Renal and hepatic impairment

No dose adjustment is required for patients with renal or hepatic impairment (see section 5.2).

Paediatric population

The safety and efficacy of Fasenra in children aged 6 to 18 years have not been established.

No data are available for children aged 6 to 11 years old. Currently available data in children 12 to less than 18 years old are described in sections 4.8, 5.1 and 5.2 but no recommendation on a posology can be made.

Method of administration

Fasenra is administered as a subcutaneous injection.

It should be injected into the thigh or abdomen. If the healthcare professional or caregiver administers the injection, the upper arm can also be used. It should not be injected into areas where the skin is tender, bruised, erythematous, or hardened. Comprehensive instructions for administration using the pre-filled pen are provided in the 'Instructions for Use'.

4.3 Contraindications

Hypersensitivity to the active substance or to any of the excipients listed in section 6.1.

4.4 Special warnings and precautions for use

Fasenra should not be used to treat acute asthma exacerbations.

Patients should be instructed to seek medical advice if their asthma remains uncontrolled or worsens after initiation of treatment.

Abrupt discontinuation of corticosteroids after initiation of Fasenra therapy is not recommended.

Reduction in corticosteroid doses, if appropriate, should be gradual and performed under the supervision of a physician.

Hypersensitivity reactions

Acute systemic reactions including anaphylactic reactions and hypersensitivity reactions (e.g. urticaria, papular urticaria, rash) have occurred following administration of benralizumab (see section 4.8). These reactions may occur within hours of administration, but in some instances have a delayed onset (i.e. days).

A history of anaphylaxis unrelated to benralizumab may be a risk factor for anaphylaxis following Fasenra administration (see section 4.3). In line with clinical practice, patients should be monitored for an appropriate time after administration of Fasenra.

In the event of a hypersensitivity reaction, Fasenra should be discontinued permanently and appropriate therapy initiated.

Parasitic (Helminth) Infection

Eosinophils may be involved in the immunological response to some helminth infections. Patients with known helminth infections were excluded from participation in clinical trials. It is unknown if Fasenra may influence a patient's response against helminth infections.

Patients with pre-existing helminth infections should be treated before initiating therapy with Fasenra.

If patients become infected, while receiving treatment with Fasenra and do not respond to anti-helminth treatment, treatment with Fasenra should be discontinued until infection resolves.

4.5 Interaction with other medicinal products and other forms of interaction

In a randomized, double-blind parallel-group study of 103 patients aged between 12 and 21 years with severe asthma, the humoral antibody responses induced by seasonal influenza virus vaccination do not appear to be affected by benralizumab treatment. An effect of benralizumab on the pharmacokinetics of co-administered medicinal products is not expected (see section 5.2).

Cytochrome P450 enzymes, efflux pumps and protein-binding mechanisms are not involved in the clearance of benralizumab. There is no evidence of IL-5R α expression on hepatocytes. Eosinophil depletion does not produce chronic systemic alterations of proinflammatory cytokines.

4.6 Fertility, pregnancy and lactation

Pregnancy

There is a limited amount of data (less than 300 pregnancy outcomes) from the use of benralizumab in pregnant women.

Animal studies do not indicate direct or indirect harmful effects with respect to reproductive toxicity (see section 5.3).

Monoclonal antibodies, such as benralizumab, are transported across the placenta linearly as pregnancy progresses; therefore, potential exposure to a fetus is likely to be greater during the second and third trimester of pregnancy.

It is preferable to avoid the use of Fasenra during pregnancy. Its administration to pregnant women should only be considered if the expected benefit to the mother is greater than any possible risk to the fetus.

Breast-feeding

It is unknown whether benralizumab or its metabolites are excreted in human or animal milk. Risk to the breast-fed child cannot be excluded.

A decision must be made whether to discontinue breast-feeding or to discontinue/abstain from using Fasenra taking into account the benefit of breast-feeding for the child and the benefit of therapy for the woman.

Fertility

There are no fertility data in humans. Animal studies showed no adverse effects of benralizumab treatment on fertility (see section 5.3).

4.7 Effect on ability to drive and use machines

Fasenra has no or negligible influence on the ability to drive and use machines.

4.8 Undesirable effects

Summary of the safety profile

The most commonly reported adverse reactions during treatment are headache (8%) and pharyngitis (3%). Anaphylactic reactions have been reported.

Tabulated list of adverse reactions

A total of 2,514 patients, out of whom 1,663 patients had severe uncontrolled eosinophilic asthma, received benralizumab during clinical studies of 48 to 56 weeks duration.

The frequency of adverse reactions is defined using 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 $< 1/1,000$); very rare ($< 1/10,000$); and not known (cannot be estimated from available data). Within each frequency grouping, adverse reactions are presented in order of decreasing seriousness.

Table 1. Tabulated list of adverse reactions

System organ class	Adverse reaction	Frequency
Infections & infestations	Pharyngitis*	Common
Immune system disorders	Hypersensitivity reactions**	Common
	Anaphylactic reaction	Not known
Nervous system disorders	Headache	Common
General disorders and administration site conditions	Pyrexia	Common
	Injection site reaction	

* Pharyngitis was defined by the following grouped preferred terms: 'Pharyngitis', 'Pharyngitis bacterial', 'Viral pharyngitis', 'Pharyngitis streptococcal'.

**Hypersensitivity reactions were defined by the following grouped preferred terms: 'Urticaria', 'Papular urticaria', and 'Rash'. For example of the associated manifestations reported and a description of the time to onset, see section 4.4.

Description of selected adverse reaction

Injection site reactions

In placebo-controlled studies, injection site reactions (e.g. pain, erythema, pruritus, papule) occurred at a rate of 2.2% in patients treated with the recommended benralizumab dose compared with 1.9% in patients treated with placebo.

Long-term safety

In a 56-week extension trial in patients with asthma from Trials 1, 2 and 3, 842 patients were treated with Fasenra at the recommended dose and remained in the trial. The overall adverse event profile was similar to the asthma trials described above.

Paediatric population

There are limited data in paediatric patients (see section 5.1). The frequency, type and severity of adverse reactions in the adolescent population were observed to be similar to those seen in adults.

Reporting of suspected adverse reactions

Reporting suspected adverse reactions after authorisation of the medicinal product is important. It allows continued monitoring of the benefit/risk balance of the medicinal product. For adverse reaction reporting please contact +628121064222 or email: AE.Indonesia@astrazeneca.com

4.9 Overdose

Doses of up to 200 mg were administered subcutaneously in clinical trials to patients with eosinophilic asthma without evidence of dose-related toxicities.

There is no specific treatment for an overdose with benralizumab. If overdose occurs, the patient should be treated supportively with appropriate monitoring as necessary.

5. PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

Pharmacotherapeutic group: Drugs for obstructive airway diseases, other systemic drugs for obstructive airway diseases, ATC code: R03DX10

Mechanism of action

Benralizumab is an anti-eosinophil, humanised afucosylated, monoclonal antibody (IgG1, kappa). It binds to the alpha subunit of the human interleukin-5 receptor (IL-5R α) with high affinity and specificity. The IL-5 receptor is specifically expressed on the surface of eosinophils and basophils. The absence of fucose in the Fc domain of benralizumab results in high affinity for Fc γ RIII receptors on immune effector cells such as natural killer (NK) cells. This leads to apoptosis of eosinophils and basophils through enhanced antibody-dependent cell-mediated cytotoxicity (ADCC), which reduces eosinophilic inflammation.

Pharmacodynamic effects

Effect on blood eosinophils

Treatment with benralizumab results in near complete depletion of blood eosinophils within 24 hours following the first dose which is maintained throughout treatment. The depletion of blood eosinophils is accompanied by a reduction in serum eosinophil granule proteins eosinophil derived neurotoxin (EDN) and eosinophil cationic protein (ECP) and a reduction in blood basophils.

Effect on eosinophils in the airway mucosa

The effect of benralizumab on eosinophils in the airway mucosa in asthmatic patients with elevated sputum eosinophil counts (at least 2.5%) was evaluated in a 12-week, phase 1, randomised, double-blind, placebo-controlled clinical study with benralizumab 100 or 200 mg SC. In this study there was a median reduction from baseline in airway mucosa eosinophils of 96% in the benralizumab treated group compared to a 47% reduction in the placebo group (p=0.039).

Clinical efficacy

The efficacy of Fasenra was evaluated in 3 randomised, double-blind, parallel-group, placebo-controlled clinical trials between 28 to 56 weeks duration, in patients aged 12 to 75 years.

In these studies, Fasenra was administered at a dose of 30 mg once every 4 weeks for the first 3 doses, and then every 4 or 8 weeks thereafter as add-on to background treatment and was evaluated in comparison with placebo.

The two exacerbation trials, SIROCCO (Trial 1) and CALIMA (Trial 2), enrolled a total of 2,510 patients with severe uncontrolled asthma, 64% females, with a mean age of 49 years. Patients had a history of 2 or more asthma exacerbations requiring oral or systemic corticosteroid treatment (mean of 3) in the past 12 months, ACQ-6 score of 1.5 or more at screening, and reduced lung function at baseline (mean predicted pre-bronchodilator forced expiratory volume in 1 second [FEV₁] of 57.5%), despite regular treatment with high-dose inhaled corticosteroid (ICS) (Trial 1) or with medium or high-dose ICS (Trial 2) and a long-acting β -agonist (LABA); at least one additional controller was administered to 51% and 41% of these patients, respectively.

For the oral corticosteroid (OCS) reduction trial ZONDA (Trial 3), a total of 220 asthma patients (61% female; mean age of 51 years) were enrolled; they were treated with daily OCS (8 to 40 mg per

day; median of 10 mg) in addition to regular use of high-dose ICS and LABA with at least one additional controller to maintain asthma control in 53% of the cases. The trial included an 8-week run-in period during which the OCS was titrated to the minimum effective dose without losing asthma control. Patients had blood eosinophil counts ≥ 150 cells/ μ L and a history of at least one exacerbation in the past 12 months.

While 2 dosing regimens were studied in Trials 1, 2, and 3, the recommended dosing regimen is Fasenra administered every 4 weeks for the first 3 doses, then every 8 weeks thereafter (see section 4.2) as no additional benefit was observed by more frequent dosing. The results summarised below are those for the recommended dosing regimen.

Exacerbation trials

The primary endpoint was the annual rate of clinically significant asthma exacerbations in patients with baseline blood eosinophil counts ≥ 300 cells/ μ L who were taking high-dose ICS and LABA. Clinically significant asthma exacerbation was defined as worsening of asthma requiring use of oral/systemic corticosteroids for at least 3 days, and/or emergency department visits requiring use of oral/systemic corticosteroids and/or hospitalisation. For patients on maintenance oral corticosteroids, this was defined as a temporary increase in stable oral/systemic corticosteroids for at least 3 days or a single depo-injectable dose of corticosteroids.

In both trials, patients receiving Fasenra experienced significant reductions in annual exacerbation rates compared to placebo in patients with blood eosinophils ≥ 300 cells/ μ L. In addition, change from baseline in mean FEV₁ showed benefit as early as 4 weeks, which was maintained through to end of treatment (**Table 2**).

Reductions in exacerbation rates were observed irrespective of baseline eosinophil count; however, increasing baseline eosinophil counts was identified as a potential predictor of improved treatment response particularly for FEV₁.

Table 2. Results of annual exacerbation rate and lung function at end of treatment of Trial 1 and 2 by eosinophil count.

	Trial 1		Trial 2	
	Fasenra	Placebo	Fasenra	Placebo
Blood eosinophil count ≥ 300 cells/ μ L ^a	n = 267	n = 267	n = 239	n = 248
Clinically significant exacerbations				
Rate	0.74	1.52	0.73	1.01
Difference	-0.78		-0.29	
Rate ratio (95% CI)	0.49 (0.37, 0.64)		0.72 (0.54, 0.95)	
p-value	<0.001		0.019	
Pre-bronchodilator FEV ₁ (L)				
Mean baseline	1.660	1.654	1.758	1.815
Improvement from baseline	0.398	0.239	0.330	0.215
Difference (95% CI)	0.159 (0.068, 0.249)		0.116 (0.028, 0.024)	
p-value	0.001		0.010	

Blood eosinophil count <300 cells/μL^b	n = 131	n = 140	n = 125	n = 122
Clinically significant exacerbations				
Rate	1.11	1.34	0.83	1.38
Difference	-0.23		-0.55	
Rate ratio (95% CI)	0.83 (0.59, 1.16)		0.60 (0.42, 0.86)	
Pre-bronchodilator FEV₁ (L)				
Mean change	0.248	0.145	0.140	0.156
Difference (95% CI)	0.102 (-0.003, 0.208)		-0.015 (-0.127, 0.096)	

^a Intent to treat population (patients on high-dose ICS and blood eosinophils ≥ 300 cells/ μ L).

^b Not powered to detect a treatment difference in patients with blood eosinophils <300 cells/ μ L.

Across Trials 1 and 2 combined, there was a numerically greater exacerbation rate reduction and greater improvements in FEV₁ with increasing baseline blood eosinophils.

The rate of exacerbations requiring hospitalisation and/or emergency room visits for patients receiving Fasenra compared to placebo for Trial 1 were 0.09 versus 0.25 (rate ratio 0.37, 95% CI: 0.20, 0.67, $p < 0.001$) and for Trial 2 were 0.12 versus 0.10 (rate ratio 1.23, 95% CI: 0.64, 2.35, $p = 0.538$). In Trial 2, there were too few events in the placebo treatment arm to draw conclusions for exacerbations requiring hospitalisation or emergency room visits.

In both Trials 1 and 2, patients receiving Fasenra experienced statistically significant reductions in asthma symptoms (Total Asthma Score) compared to patients receiving placebo. Similar improvement in favour of Fasenra was observed for the Asthma Control Questionnaire-6 (ACQ-6) and Standardised Asthma Quality of Life Questionnaire for 12 Years and Older (AQLQ(S)+12) (Table 3).

Table 3. Treatment difference in mean change from baseline in total asthma symptom score, ACQ-6 and AQLQ(s)+12 at end of treatment – Patients on high-dose ICS and blood eosinophils ≥ 300 cells/ μ L

	Trial 1		Trial 2	
	Fasenra (n ^a =267)	Placebo (n ^a =267)	Fasenra (n ^a =239)	Placebo (n ^a =248)
Total asthma symptom score ^b				
Mean baseline	2.68	2.74	2.76	2.71
Improvement from baseline	-1.30	-1.04	-1.40	-1.16
Difference (95% CI)	-0.25 (-0.45, -0.06)		-0.23 (-0.43, -0.04)	
	Trial 1		Trial 2	
p-value	0.012		0.019	
ACQ-6				
Mean baseline	2.81	2.90	2.80	2.75
Improvement from baseline	-1.46	-1.17	-1.44	-1.19
Difference (95% CI)	-0.29 (-0.48, -0.10)		-0.25 (-0.44, -0.07)	
AOLO(S)+12				

Mean baseline	3.93	3.87	3.87	3.93
Improvement from baseline	1.56	1.26	1.56	1.31
Difference (95% CI)	0.30 (0.10, 0.50)		0.24 (0.04, 0.45)	

^a Number of patients (n) varies slightly due to the number of patients for whom data were available for each variable.

Results shown based on last available data for each variable.

^b Asthma symptom scale: total score from 0 (least) to 6 (most); day and night time asthma symptom scores from 0 (least) to 3 (most) symptom. Individual day and night time scores were similar.

Subgroup analyses by prior exacerbation history

Subgroup analyses from Trials 1 and 2 identified patients with higher prior exacerbation history as a potential predictor of improved treatment response. When considered alone or in combination with baseline blood eosinophils count, these factors may further identify patients who may achieve greater response from benralizumab treatment (**Table 4**).

Table 4. Exacerbation rate and pulmonary function (FEV₁) at end of treatment by number of exacerbations in the previous year - Patients on high-dose ICS and blood eosinophils ≥ 300 cells/ μ L

	Trial 1		Trial 2	
	Fasenra (n ^a =267)	Placebo (n ^a =267)	Fasenra (n ^a =239)	Placebo (n ^a =248)
Baseline of 2 exacerbations				
n	164	149	144	151
Exacerbation rate	0.57	1.04	0.63	0.62
Difference	-0.47		0.01	
Rate ratio (95% CI)	0.55 (0.37, 0.80)		1.01 (0.70, 1.46)	
Pre-bronchodilator FEV ₁ mean change	0.343	0.230	0.266	0.236
Difference (95% CI)	0.113 (-0.002, 0.228)		0.029 (-0.079, 0.137)	
Baseline of 3 or more exacerbations				
n	103	118	95	97
Exacerbation rate	0.95	2.23	0.82	1.65
Difference	-1.28		-0.84	
Rate ratio	0.43 (0.29, 0.63)		0.49 (0.33, 0.74)	
Pre-bronchodilator	0.486	0.251	0.440	0.174
Difference (95% CI)	0.235 (0.088, 0.382)		0.265 (0.115, 0.415)	

Oral corticosteroid dose reduction trial

Trial 3 evaluated the effect of Fasenra on reducing the use of maintenance oral corticosteroids. The primary endpoint was percent reduction from baseline of the final OCS dose during Weeks 24 to 28, while maintaining asthma control. **Table 5** summarizes the study results for Trial 3.

Table 5. Effect of Fasenra on OCS dose reduction, Trial 3

	Fasenra (N=73)	Placebo (N=75)
Wilcoxon rank sum test (primary analysis method)		
Median % reduction in daily OCS dose from baseline (95% CI)	75 (60, 88)	25 (0, 33)
Wilcoxon rank sum test p-value	<0.001	

Proportional odds model (sensitivity analysis)		
Percent reduction in OCS from baseline at Week 28		
≥90% reduction	27 (37%)	9 (12%)
≥75% reduction	37 (51%)	15 (20%)
≥50% reduction	48 (66%)	28 (37%)
>0% reduction	58 (79%)	40 (53%)
No change or no decrease in OCS	15 (21%)	35 (47%)
Odds ratio (95% CI)	4.12 (2.22, 7.63)	
Reduction in the daily OCS dose to 0 mg/day*	22 (52%)	8 (19%)
Odds ratio (95% CI)	4.19 (1.58, 11.12)	
Reduction in the daily OCS dose to ≤5 mg/day	43 (59%)	25 (33%)
Odds ratio (95% CI)	2.74 (1.41, 5.31)	
Exacerbation rate	0.54	1.83
Rate ratio (95% CI)	0.30 (0.17, 0.53)	
Exacerbation rate requiring hospitalisation/emergency room visit	0.02	0.32
Rate ratio (95% CI)	0.07 (0.01, 0.63)	

*Only patients with an optimized baseline OCS dose of 12.5 mg or less were eligible to achieve a 100% reduction in OCS dose during the study.

Lung function, asthma symptom score, ACQ-6 and AQLQ(S)+12 were also assessed in Trial 3 and showed results similar to those in Trials 1 and 2.

Long-term extension trial

The long-term efficacy and safety of Fasenra was evaluated in a phase 3, 56-week extension trial BORA (Trial 4). The trial enrolled 2123 patients, 2037 adults and 86 adolescent patients (aged 12 years and older) from Trials 1, 2 and 3. Trial 4 assessed the long-term effect of Fasenra on annual exacerbation rate, lung function, ACQ-6, AQLQ(S)+12 and maintenance of OCS reduction at the 2 dosing regimens studied in the predecessor studies.

At the recommended dosing regimen, the reduction in annual rate of exacerbations observed in the placebo-controlled predecessor Trials 1 and 2 (in patients with baseline blood eosinophil counts ≥300 cells/μL who were taking high-dose ICS) was maintained over the second year of treatment (**Table 6**). In patients who received Fasenra in predecessor Trials 1 and 2, 73% were exacerbation-free in the extension Trial 4.

Table 6. Exacerbations over an extended treatment period^a

	Placebo^b (N=338)	Fasenra (N=318)		
	Trial 1 & 2	Trial 1 & 2	Trial 4	Trial 1,2 & 4^c
Rate	1.23	0.65	0.48	0.56

^a. Patients that entered Trial 4 from predecessor Trials 1 and 2 with baseline blood eosinophil counts ≥300 cells/μL who were taking high-dose ICS.

^b. Placebo patients in Trials 1 and 2 are included up to the end of the predecessor trial (Week 48 in Trial 1, Week 56 in Trial 2).

^c. Total duration of treatment: 104 – 112 weeks

Similar maintenance of effect was observed throughout Trial 4 in lung function, ACQ-6 and AQLQ(S)+12 (**Table 7**).

Table 7. Change from baseline for lung function, ACQ-6, and AQLQ(S)+12^a

	Trial 1 & 2 Baseline ^b	Trial 1 & 2 EOT ^c	Trial 4 EOT ^d
Pre-bronchodilator FEV₁ (L)			
n	318	305	290
Mean baseline (SD)	1.741 (0.621)	-	-
Change from baseline (SD) ^e	-	0.343 (0.507)	0.404 (0.555)
ACQ-6			
n	318	315	296
Mean baseline (SD)	2.74 (0.90)	-	-
Change from baseline (SD) ^e	-	-1.44 (1.13)	-1.47 (1.05)
AQLQ+12			
n	307	306	287
Mean baseline (SD)	3.90 (0.99)	-	-
Change from baseline (SD) ^e	-	1.58 (1.23)	1.61 (1.21)

n= number of patients with data at timepoint. SD = standard deviation

a. Baseline blood eosinophil counts ≥ 300 cells/ μ L and taking high-dose ICS: Fasenra administered at the recommended dosage regimen.

b. Integrated analysis of Trial 1 and 2 baseline includes adults and adolescents.

c. Integrated analysis at End of Treatment (EOT) of Trial 1(Week 48) and Trial 2 (Week 56).

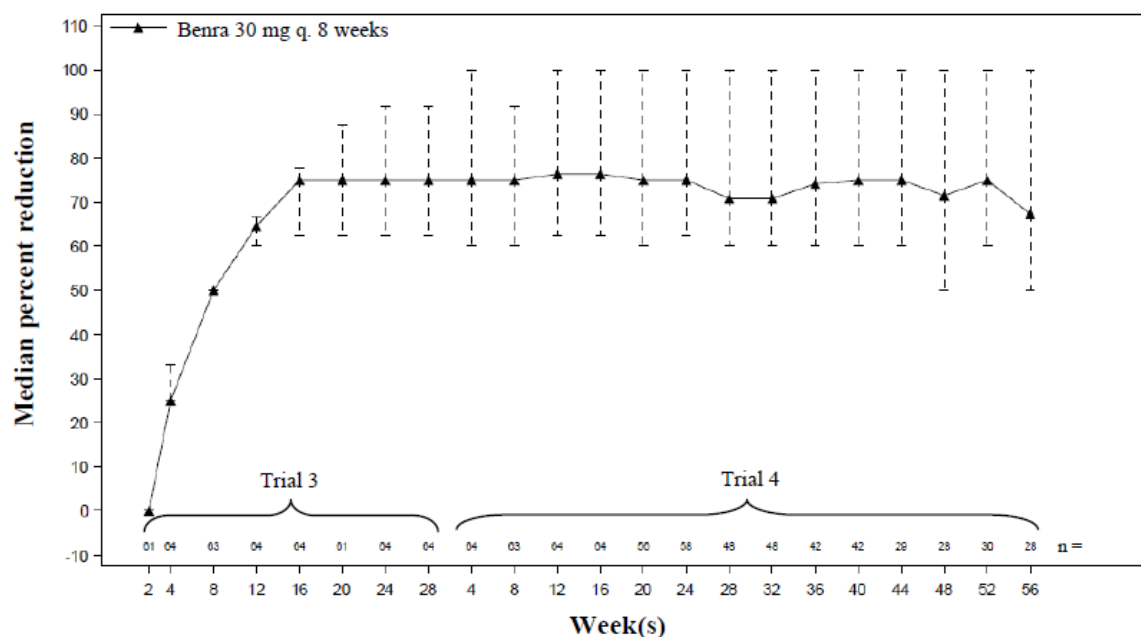
d. EOT for Trial 4 was Week 48 (the last timepoint for adults and adolescent data).

e. Baseline is prior to Fasenra treatment in Trial 1 and 2.

Efficacy in Trial 4 was also evaluated in patients with baseline blood eosinophil counts < 300 cells/ μ L and was consistent with Trials 1 and 2.

Maintenance of the reduction in daily OCS dose was also observed over the extension trial in patients enrolled from Trial 3 (Figure 1).

Figure 1. Median percent reductions in daily OCS over time (Trial 3 and 4)^a



a. Predecessor Trial 3 patients who continued Fasenra treatment into Trial 4. Patients were permitted to enter a second extension trial after a minimum of 8 weeks in Trial 4 without completing the 56-week extension period.

Immunogenicity

Overall, treatment-emergent anti-drug antibody response developed in 107 out of 809 (13%) patients treated with Fasenra at the recommended dosing regimen during the 48 to 56 week treatment period of the phase 3 placebo controlled exacerbation trials. Most antibodies were neutralising and persistent. Anti-benralizumab antibodies were associated with increased clearance of benralizumab and increased blood eosinophil levels in patients with high anti-drug antibody titres compared to antibody negative patients; in rare cases, blood eosinophil levels returned to pre-treatment levels. Based on current patient follow-up, no evidence of an association of anti-drug antibodies with efficacy or safety was observed.

Following a second year of treatment of these patients from the phase 3 placebo-controlled trials, an additional 18 out of 510 (4%) had newly developed treatment-emergent antibodies. Overall, in patients who were anti-drug antibody positive in the predecessor trials, titres remained stable or declined in the second year of treatment. No evidence of an association of anti-drug antibodies with efficacy or safety was observed.

Paediatric population

There were 108 adolescents aged 12 to 17 with asthma enrolled in the phase 3 trials (Trial 1: n=53, Trial 2: n=55). Of these, 46 received placebo, 40 received Fasenra every 4 weeks for 3 doses, followed by every 8 weeks thereafter, and 22 received Fasenra every 4 weeks. In these trials, the asthma exacerbation rate in adolescent patients treated with Fasenra administered at the recommended dosing regimen was 0.70 (n=40, 95% CI: 0.42, 1.18) compared to 0.41 for placebo (n=46, 95% CI: 0.23, 0.73) [rate ratio 1.70, 95% CI: 0.78, 3.69].

Adolescent patients aged 12 to 17 (n=86) from Trials 1 and 2 continued treatment with Fasenra in Trial 4 for up to 108 weeks. Efficacy and safety were consistent with the predecessor trials.

No conclusion can be drawn regarding asthma efficacy in the paediatric population.

The European Medicines Agency has waived the obligation to submit the results of studies with Fasenra in paediatric population aged from birth to less than 6 years in asthma (see section 4.2 for information on paediatric use).

The European Medicines Agency has deferred the obligation to submit the results of studies with Fasenra in one or more subsets of the paediatric population in asthma (see section 4.2 for information on paediatric use).

5.2 Pharmacokinetic properties

The pharmacokinetics of benralizumab were dose-proportional in patients with asthma following subcutaneous administration over a dose range of 2 to 200 mg.

Absorption

Following subcutaneous administration to patients with asthma, the absorption half-life was 3.5 days. Based on population pharmacokinetic analysis, the estimated absolute bioavailability was approximately 59% and there was no clinically relevant difference in relative bioavailability in the administration to the abdomen, thigh, or upper arm.

Distribution

Based on population pharmacokinetic analysis, central and peripheral volume of distribution of benralizumab was 3.1 L and 2.5 L, respectively, for a 70 kg individual.

Biotransformation

Benralizumab is a humanised IgG1 monoclonal antibody that is degraded by proteolytic enzymes widely distributed in the body and not restricted to hepatic tissue.

Elimination

From population pharmacokinetic analysis, benralizumab exhibited linear pharmacokinetics and no evidence of target receptor-mediated clearance pathway. The estimated systemic clearance (CL) for benralizumab was at 0.29 L/d. Following subcutaneous administration, the elimination half-life was approximately 15.5 days.

Special populations

Elderly patients (≥65 years old)

Based on population pharmacokinetic analysis, age did not affect benralizumab clearance. However, no data are available in patients over 75 years of age.

Paediatric

Based on the population pharmacokinetic analysis, the pharmacokinetics of benralizumab in adolescents aged 12 to 17 years were consistent with adults. Benralizumab has not been studied in children (5 to 11 years old) (see section 4.2).

Gender, Race

A population pharmacokinetics analysis, indicated that there was no significant effect of gender and race on benralizumab clearance.

Renal impairment

No formal clinical studies have been conducted to investigate the effect of renal impairment on benralizumab. Based on population pharmacokinetic analysis, benralizumab clearance was comparable in subjects with creatinine clearance values between 30 and 80 mL/min and patients with normal renal function. There are limited data available in subjects with creatinine clearance values less than 30 mL/min; however, benralizumab is not cleared renally.

Hepatic impairment

No formal clinical studies have been conducted to investigate the effect of hepatic impairment on benralizumab. IgG monoclonal antibodies are not primarily cleared via hepatic pathway; change in hepatic function is not expected to influence benralizumab clearance. Based on population pharmacokinetic analysis, baseline hepatic function biomarkers (ALT, AST, and bilirubin) had no clinically relevant effect on benralizumab clearance.

Drug-Drug interaction

An effect of benralizumab on the pharmacokinetics of co-administered medicinal products is not expected. Based on the population pharmacokinetic analysis, commonly co-administered medicinal products (montelukast, paracetamol, proton pump inhibitors, macrolides and theophylline/aminophylline) had no effect on benralizumab clearance in patients with asthma.

5.3 Preclinical safety data

As benralizumab is a monoclonal antibody, no genotoxicity or carcinogenicity studies have been conducted.

Animal toxicology and/or pharmacology

Non-clinical data reveal no special hazards for humans based on conventional studies of safety pharmacology or repeated dose toxicity studies in monkeys. Intravenous and subcutaneous administration to cynomolgus monkeys was associated with reductions in peripheral blood and bone marrow eosinophil counts, with no toxicological findings.

Pregnancy

In a prenatal and postnatal development study in pregnant cynomolgus monkeys, there were no benralizumab-related maternal, embryo-foetal, or postnatal effects observed.

Fertility

No dedicated animal studies have been conducted. No benralizumab-related impairment was observed in reproductive parameters of male and female cynomolgus monkeys. Examination of surrogate fertility parameters (including organ weights and histopathology of reproductive tissues) in animals treated with benralizumab suggested no impairment of fertility. However, in the offspring of monkeys dosed while pregnant, there was a reduction in eosinophils.

6. PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Histidine
Histidine hydrochloride monohydrate
Trehalose dihydrate
Polysorbate 20
Water for injections

6.2 Incompatibilities

In the absence of compatibility studies, this medicinal product must not be mixed with other medicinal products.

6.3 Shelf life

3 years

6.4 Special precautions for disposal

Store in a refrigerator (2°C to 8°C). Fasenna may be kept at room temperature up to 25°C for a maximum of 14 days. After removal from the refrigerator, Fasenna must be used within 14 days or discarded. Store the pre-filled pen in the original package in order to protect from light.

Do not freeze. Do not shake. Do not expose to heat.

6.5 Nature and contents of container

Pre-filled pen

One mL solution in a sterile, single use pre-filled pen made from type I glass with staked 29-gauge ½-inch (12.7 mm) stainless steel needle, rigid needle shield, and Fluorotec-coated stopper in a pre-filled pen.

Pack containing 1 single-use pre-filled pen.

6.6 Special precautions for disposal and other handling

Fasenra solution for injection is supplied in a sterile single-use pre-filled pen for individual use. Do not shake. Do not freeze.

Prior to administration, warm Fasenra by leaving carton at room temperature. This generally takes 30 minutes.

Visually inspect Fasenra for particulate matter and discolouration prior to administration. Fasenra is clear to opalescent, colourless to yellow, and may contain translucent or white to off-white particles. Do not use Fasenra if liquid is cloudy, discoloured, or if it contains large particles or foreign particulate matter.

Additional information and instructions for the preparation and administration of Fasenra using the pre-filled pen are given in the package leaflet and 'Instructions for Use'.

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

7. MARKETING AUTHORISATION HOLDER

PT AstraZeneca Indonesia, Cikarang, Bekasi – Indonesia

8. MARKETING AUTHORISATION NUMBER(S)

1 pack @ 1 pre-filled pen, 30 mg benralizumab in 1 mL (Reg. No: DKIXXXXXXXXXXXXXX)

9. DATE OF FIRST AUTHORISATION

As on approval date

10. DATE OF REVISION OF THE TEXT

As on approval date

HARUS DENGAN RESEP DOKTER

ANGEL Doc ID-004490311

Manufactured by Catalent Indiana, LLC, Bloomington, United States of America

Released by AstraZeneca AB, Södertälje, 151 85, Sweden

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**Pada proses pembuatannya bersinggungan
dengan bahan bersumber babi.**

Leaflet Informasi Pasien
Fasenra 30 mg cairan injeksi dalam pre-filled pen
benralizumab

Bacalah seluruh isi leaflet dengan seksama sebelum Anda mulai menggunakan obat ini

- Simpanlah leaflet ini, Anda mungkin perlu membacanya kembali di kemudian hari
- Jika Anda memiliki pertanyaan lebih lanjut, tanyakanlah pada dokter, perawat, ataupun apoteker Anda
- Apabila Anda mendapatkan efek samping, konsultasikan pada dokter, perawat atau apoteker Anda. Anda mungkin mengalami efek samping lain yang tidak terdaftar pada leaflet ini. Lihat bagian 4.

Informasi di leaflet ini:

1. Fasenra dan kegunaannya
2. Hal yang perlu diketahui sebelum menggunakan Fasenra
3. Cara menggunakan Fasenra
4. Efek samping yang mungkin terjadi
5. Cara penyimpanan Fasenra
6. Informasi lebih lanjut

1. FASENRA DAN KEGUNAANNYA

Apa itu Fasenra

Fasenra adalah obat yang mengandung zat aktif benralizumab, yang merupakan antibodi monoclonal, yaitu suatu tipe protein yang mengenali dan menempel pada target spesifik di dalam tubuh. Target dari benralizumab adalah sebuah protein yang disebut reseptor interleukin-5, yang biasanya ditemukan pada suatu tipe sel darah putih yang bernama eosinofil.

Apa kegunaan Fasenra

Fasenra digunakan untuk menangani asma eosinofilik parah pada pasien dewasa (kadar eosinophil darah ≥ 300 sel per mikroliter atau ≥ 150 sel per mikroliter bagi pasien yang menggunakan kortikosteroid oral). Asma eosinofilik merupakan suatu tipe asma dimana pasien memiliki terlalu banyak eosinofil di dalam darah atau paru-parunya.

Fasenra digunakan bersamaan dengan terapi lainnya untuk menangani asma (kortikosteroid inhalasi dosis tinggi ditambah obat asma beta agonis jangka panjang) dimana penyakit tersebut tidak terkontrol dengan baik ketika ditangani dengan obat-obat tersebut.

Bagaimana Fasenra bekerja

Eosinofil adalah sel darah putih yang memiliki peran dalam terjadinya peradangan pada asma. Dengan menempel pada eosinofil, Fasenra membantu untuk mengurangi jumlah dari eosinofil.

Apa keuntungan dari menggunakan Fasenra

Fasenra bisa mengurangi jumlah serangan asma yang Anda alami, membantu Anda untuk bernafas lebih baik dan mengurangi gejala asma Anda. Apabila Anda sedang mengkonsumsi obat yang disebut 'kortikosteroid oral', penggunaan Fasenra juga bisa membantu Anda mengurangi dosis harian atau menghentikan penggunaan kortikosteroid oral yang Anda perlukan untuk mengendalikan asma Anda.

2. HAL YANG PERLU DIKETAHUI SEBELUM MENGGUNAKAN FASENRA

Jangan menggunakan Fasenra:

- Jika Anda **alergi** terhadap benralizumab atau bahan-bahan lain yang terdapat dalam obat ini (terdapat pada Bagian 6). Periksalah pada dokter, perawat atau apoteker Anda untuk memastikannya.

Peringatan dan perhatian

Bicarakan pada dokter, perawat atau apoteker Anda sebelum Anda diberikan Fasenra:

- Apabila **asma Anda tetap tidak terkontrol atau memburuk** selama pengobatan dengan produk ini.
- Apabila Anda memiliki gejala dari reaksi alergi (Lihat bagian 4). Reaksi alergi pernah terjadi pada pasien yang menggunakan produk ini.

Perhatikan gejala dan tanda-tanda dari reaksi alergi yang serius

Fasenra berpotensi menyebabkan reaksi alergi serius. Anda harus memperhatikan tanda-tanda dari reaksi ini (seperti gatal-gatal, ruam, sulit bernafas, lemas, pusing, lunglai dan/atau bengkak pada wajah, lidah dan mulut) ketika Anda menggunakan Fasenra.

Penting bagi Anda untuk berdiskusi dengan dokter tentang bagaimana cara mengenali gejala awal dari reaksi alergi serius dan bagaimana mengelola reaksi ini apabila terjadi pada Anda.

Obat-obat lainnya untuk asma

Jangan tiba-tiba menghentikan penggunaan obat pelega untuk asma Anda ketika Anda mulai menggunakan Fasenra.

Apabila hasil pengobatan Anda baik, dokter Anda mungkin akan mencoba mengurangi dosis dari obat-obat ini, terutama obat yang bernama ‘kortikosteroid’. Penurunan dosis akan dilakukan secara bertahap, di bawah pengawasan dokter Anda.

Obat-obatan lain dan Fasenra

Informasikan dokter Anda apabila Anda sedang, baru saja atau mungkin akan mengonsumsi obat lainnya sebelum menggunakan Fasenra.

Anak-anak dan remaja

Keamanan dan khasiat dari obat ini terhadap anak-anak di bawah usia 18 tahun belum diketahui.

Hamil dan menyusui

Apabila Anda hamil, merasa Anda mungkin hamil atau berencana untuk hamil, **konsultasikan pada dokter Anda untuk memberikan saran** sebelum menggunakan obat ini.

Jangan menggunakan Fasenra apabila Anda hamil kecuali atas saran dari dokter. Belum diketahui apakah Fasenra dapat membahayakan janin Anda.

Belum diketahui apakah kandungan dari Fasenra dapat masuk hingga ke air susu ibu. **Apabila Anda sedang menyusui atau berencana untuk menyusui, harap konsultasikan pada dokter Anda.**

Mengemudi dan menggunakan mesin

Fasenra kemungkinan tidak berefek pada kemampuan untuk mengemudi dan menggunakan mesin.

3. CARA MENGGUNAKAN FASENRA

Selalu gunakan obat ini sebagaimana arahan dari dokter Anda. Periksakan kepada dokter, perawat, atau apoteker Anda apabila Anda tidak yakin tentang penggunaan Fasenra.

Fasenra diberikan dengan cara menyuntikkan pada kulit bagian bawah (subkutan). Anda dan dokter atau perawat Anda perlu memutuskan apakah Anda sebaiknya menyuntikkan Fasenra sendiri atau tidak. Anda tidak boleh menyuntikkan Fasenra sendiri apabila Anda baru pertama kali menggunakan Fasenra dan apabila Anda memiliki riwayat reaksi alergi terhadap Fasenra.

Anda atau perawat pribadi Anda harus mendapatkan pelatihan tentang cara mempersiapkan dan menyuntikkan Fasenra dengan benar. Bacalah 'Instruksi Penggunaan' dengan seksama sebelum menggunakan Fasenra.

Dosis yang direkomendasikan adalah penyuntikan sebanyak 30 mg. 3 (tiga) suntikan pertama diberikan setiap 4 minggu sekali. Setelah itu, suntikan 30 mg diberikan setiap 8 minggu sekali.

Apabila satu dosis Fasenra terlewat

Apabila Anda lupa untuk menyuntikkan satu dosis Fasenra, segera konsultasikan pada dokter, perawat atau apoteker Anda.

Menghentikan pengobatan dengan Fasenra

Jangan menghentikan pengobatan dengan Fasenra kecuali dokter Anda merekomendasikannya. Menunda atau menghentikan pengobatan dengan Fasenra dapat menyebabkan gejala dan serangan asma Anda muncul kembali.

Apabila gejala asma Anda semakin memburuk ketika menerima suntikan Fasenra, **hubungi dokter Anda**.

Apabila Anda memiliki pertanyaan lebih lanjut mengenai obat ini, tanyakan pada dokter, perawat atau apoteker Anda.

4. EFEK SAMPING YANG MUNGKIN TERJADI

Seperti obat-obatan lainnya, obat ini dapat menimbulkan efek samping, walaupun tidak semua orang mengalaminya.

Reaksi alergi serius

Segera cari pertolongan medis apabila Anda merasa mengalami reaksi alergi. Reaksi seperti ini dapat terjadi dalam hitungan jam atau hari setelah penyuntikan.

Belum diketahui (frekuensi belum dapat ditentukan dari data yang tersedia):

- Anafilaksis
Gejala yang umumnya timbul:
 - Bengkak pada wajah, lidah dan mulut
 - Kesulitan bernafas
 - Lemah, pusing, lunglai (akibat penurunan tekanan darah)

Umum (mungkin terjadi pada 1 dari 10 orang):

- Gatal-gatal
- Ruam

Efek samping lain

Umum (mungkin terjadi pada 1 dari 10 orang)

- Pusing
- Radang tenggorokan
- Demam
- Area kulit yang disuntik (misalnya nyeri, gatal, bengkak di tempat kulit disuntik)

Pelaporan efek samping

Apabila Anda merasakan adanya efek samping, laporkan pada dokter, apoteker atau perawat Anda. Laporkan juga efek tidak diinginkan lain yang Anda rasakan, namun belum tercantum pada *leaflet* ini. Untuk melaporkan efek samping atau kejadian tidak diinginkan, Anda juga dapat menghubungi: +628121064222 ataupun mengirim *email* ke: AE.Indonesia@astrazeneca.com. Dengan melaporkan efek samping Anda ikut membantu menyediakan informasi tambahan terkait keamanan obat ini.

5. CARA PENYIMPANAN FASENRA

Jauhkan dari jangkauan anak-anak.

Jangan gunakan obat ini setelah tanggal kadaluarsa yang tercantum pada label. Tanggal kadaluarsa yang tercantum mengacu pada hari terakhir dari bulan kadaluarsa.

Simpan dalam kemasan asli dan hindari dari sinar langsung.

Simpan dalam kulkas (2°C hingga 8°C).

Suntikan boleh disimpan pada suhu ruangan hingga 25°C selama maksimum 14 hari. Setelah dikeluarkan dari kulkas, Fasenra harus digunakan dalam 14 hari atau dibuang.

Jangan dikocok, dibekukan atau dipaparkan pada panas.

Fasenra hanya untuk penggunaan sekali. Jangan buang obat apapun ke dalam saluran air. Tanyakan apoteker Anda tentang cara yang baik untuk membuang obat yang tidak lagi Anda gunakan. Tindakan ini dapat membantu untuk menjaga lingkungan sekitar.

6. ISI DARI KEMASAN DAN INFORMASI LEBIH LANJUT

Apa kandungan Fasenra

Zat aktif dari Fasenra adalah benralizumab. Larutan 1 mL dalam satu pre-filled pen mengandung 30 mg benralizumab.

Zat lain yang terkandung pada Fasenra adalah histidine, histidine hydrochloride monohydrate, trehalose dihydrate, polysorbate 20 dan water for injection.

Seperti apa bentuk Fasenra dan isi dari kemasan

Fasenra merupakan larutan dalam alat suntik kaca bening. Warna larutan bervariasi, dari bening hingga kuning. Mungkin pula terlihat partikel dalam larutan.

Fasenra tersedia dalam kemasan berisi 1 pre-filled pen.

7. INFORMASI LEBIH LANJUT

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Cikarang, Bekasi - Indonesia

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