HIGHLIGHTS OF PRESCRIBING INFORMATION
These highlights do not include all the information needed to use CANASA safely and effectively. See full prescribing information for CANASA.

CANASA® (mesalamine) rectal suppository
Initial U.S. Approval: 1987

INDICATIONS AND USAGE
CANASA is an aminosalicylate indicated for the treatment of mild to moderately active ulcerative proctitis. Safety and effectiveness of Canasa beyond 6 weeks have not been established. (1)

DOSAGE AND ADMINISTRATION
The dosage is one 1000 mg rectal suppository once daily at bedtime. (2)

DOSE FORMS AND STRENGTHS
• 1000 mg rectal suppository (3)

CONTRAINDICATIONS
Hypersensitivity to mesalamine or to any components of the formulation (4)

WARNINGS AND PRECAUTIONS
• Renal impairment may occur. Assess renal function at the beginning of treatment and periodically during treatment. (5.1)
• Mesalamine-induced acute intolerance syndrome has been reported. Observe patients closely for worsening of these symptoms while on treatment. (5.2)
• Use caution when treating patients who are hypersensitive to sulfasalazine. (5.3)
• Mesalamine-induced cardiac hypersensitivity reactions (myocarditis and pericarditis) have been reported. (5.3)
• Hepatic failure has been reported in patients with pre-existing liver disease. Use caution when treating patients with liver disease. (5.4)

ADVERSE REACTIONS
The most common adverse reactions occurring in more than 1% of mesalamine suppository treated patients are: dizziness, rectal pain, fever, rash, acne and colitis. (6.1)

To report SUSPECTED ADVERSE REACTIONS, contact Aptalis Pharma US, Inc. at 1-800-472-2634 or FDA at 1-800-FDA-1088 or www.fda.gov/medwatch.

DRUG INTERACTIONS
• Nephrotoxic agents including NSAIDs: renal reactions have been reported. (7.1)
• Azathioprine or 6-mercaptopurine: blood disorders have been reported. (7.2)

USE IN SPECIFIC POPULATIONS
• Renal impairment: Use CANASA with caution in patients with a history of renal disease. (5.1, 7.1, 8.5, 13.2)
• Nursing Women: Caution should be exercised when administered to a nursing woman. (8.3)
• Geriatric Patients: Monitor blood cell counts in geriatric patients. (8.5)

See 17 for PATIENT COUNSELING INFORMATION and FDA-approved patient labeling. Revised: 12/2013
6 ADVERSE REACTIONS

The most serious adverse reactions seen in CANASA clinical trials or with other products that contain or are metabolized to mesalamine are:

- Renal impairment, including renal failure [See Warnings and Precautions (5.1)]
- Mesalamine-induced acute intolerance syndrome [See Warnings and Precautions (5.2)]
- Hypersensitivity reactions [See Warnings and Precautions (5.3)]
- Hepatic impairment, including hepatic failure [See Warnings and Precautions (5.4)]

6.1 Clinical Trials Experience

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

The most frequent adverse reactions observed in the double-blind, placebo-controlled trials are summarized in the Table 1 below.

Table 1: ADVERSE REACTIONS OCCURRING IN MORE THAN 1% OF MESALAMINE SUPPOSITORY TREATED PATIENTS (COMPARISON TO PLACEBO)

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Mesalamine (n = 177)</th>
<th>Placebo (n = 84)</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>Dizziness</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Rectal Pain</td>
<td>3</td>
<td>1.8</td>
</tr>
<tr>
<td>Fever</td>
<td>2</td>
<td>1.2</td>
</tr>
<tr>
<td>Rash</td>
<td>2</td>
<td>1.2</td>
</tr>
<tr>
<td>Acne</td>
<td>2</td>
<td>1.2</td>
</tr>
<tr>
<td>Colitis</td>
<td>2</td>
<td>1.2</td>
</tr>
</tbody>
</table>

In a multicenter, open-label, randomized, parallel group study comparing the CANASA 1000 mg suppository administered nightly to that of the CANASA 500 mg suppository twice daily, the two treatment groups had similar adverse event profiles. The most frequent AEs were headache (14.4%), flatulence (5.2%), abdominal pain (5.2%), diarrhea (3.1%), and nausea (3.1%). Three (3) patients had to discontinue medication because of an adverse reaction; one of these adverse reactions (headache) was deemed possibly related to study medication.

6.2 Postmarketing Experience

In addition to the adverse reactions reported above in clinical trials involving CANASA, the adverse reactions listed below have been identified during post-approval use of CANASA and other mesalamine-containing products. Because these reactions are reported voluntarily from a population of uncertain size, it is not always possible to reliably estimate their frequency or establish a causal relationship to drug exposure.

- **Body as a Whole**: drug fever, fatigue, lupus-like syndrome, medication residue
- **Cardiac Disorders**: myocarditis, pericarditis, pericardial effusion
- **Eye disorders**: eye swelling
- **Gastrointestinal Disorders**: abdominal cramps, abdominal distension, anal pruritus, anorectal discomfort, constipation, feces discolored, flatulence, frequent bowel movements, gastrointestinal bleeding, mucus stools, nausea, painful defecation, pancreatitis, proctalgia, rectal discharge, rectal tenesmus, stomach discomfort, vomiting
- **Hepatic Disorders**: cholestatic jaundice, hepatitis, jaundice, Kawasaki-like syndrome including changes in liver enzymes, liver necrosis, liver failure
- **Hematologic Disorders**: agranulocytosis, aplastic anemia, thrombocytopenia
- **Neurological/Psychiatric Disorders**: Guillain-Barre syndrome, peripheral neuropathy, transverse myelitis
- **Renal Disorders**: interstitial nephritis
- **Respiratory, Thoracic and Mediastinal Disorders**: hypersensitivity pneumonitis (including allergic alveolitis, eosinophilic pneumonitis, interstitial pneumonitis)
- **Skin and subcutaneous tissue Disorder**: alopecia, erythema, erythema nodosum, pruritus, psoriasis, pyoderma gangrenosum, urticaria

Reference ID: 3423668
7 DRUG INTERACTIONS
No investigations of interaction between CANASA and other drugs have
been performed. However, the following interactions between mesalamine
medications and other drugs have been reported.

7.1 Nephrotoxic Agents, Including Non-Steroidal Anti-Inflammatory
Drugs
The concurrent use of mesalamine with known nephrotoxic agents,
including nonsteroidal anti-inflammatory drugs (NSAIDs) may increase the
risk of renal reactions.

7.2 Azathioprine or 6-mercaptopurine
The concurrent use of mesalamine with azathioprine or 6-
mercaptopurine may increase the risk for blood disorders.

8 USE IN SPECIFIC POPULATIONS
8.1 Pregnancy
Pregnancy Category B: Reproduction studies have been performed in
rats at oral doses up to 320 mg/kg/day (about 1.7 times the recommended
human intra-rectal dose, based on body surface area) and in rabbits at oral
doses up to 495 mg/kg/day (about 5.4 times the recommended human intra-
rectal dose, based on body surface area) and have revealed no evidence of
impaired fertility or harm to the fetus due to mesalamine. There are, however,
no adequate and well controlled studies in pregnant women. Because animal
reproduction studies are not always predictive of human response, this drug
should be used in pregnancy only if clearly needed.

8.3 Nursing Mothers
Mesalamine and its N-acetyl metabolite have been detected in human
breast milk. The clinical significance of this has not been determined.
Caution should be exercised when Canasa is administered to a nursing
woman.

8.4 Pediatric Use
Safety and effectiveness in pediatric patients have not been established.

8.5 Geriatric Use
Reports from uncontrolled clinical studies and postmarketing reporting
systems suggested a higher incidence of blood dyscrasias (i.e., neutropenia
and pancytopenia) in patients who were 65 years or older who were taking
mesalamine-containing products such as CANASA. Caution should be taken
to closely monitor blood cell counts during mesalamine therapy.
Clinical trials of CANASA did not include sufficient numbers of patients
aged 65 and over to determine whether they respond differently from younger
patients. Other reported clinical experience has not identified differences in
responses between the elderly and younger patients. Systemic exposures are
increased in elderly subjects [See Clinical Pharmacology (12.3)]. In general,
dose selection for an elderly patient should be cautious, usually starting at the
low end of the dosing range, reflecting the greater frequency of decreased
hepatic, renal, or cardiac function, and of concurrent disease or other drug
therapy in elderly patients.

10 OVERDOSAGE
There have been no documented reports of serious toxicity in man
resulting from massive overdosing with mesalamine suppository. Under
ordinary circumstances, mesalamine absorption from the colon is limited.

11 DESCRIPTION
The active ingredient in CANASA 1000 mg rectal suppositories is
mesalamine, also known as mesalazine or 5-aminosalicylic acid (5-ASA).
Chemically, mesalamine is 5-aminosalicyclic acid, and is classified as
an anti-inflammatory drug. Each CANASA rectal suppository contains
1000 mg of mesalamine (USP) in a base of Hard Fat, NF.
The empirical formula is C_{7}H_{7}N_{2}O_{3}, representing a molecular weight of
153.14. The structural formula is:

8.1 Mechanism of Action
The mechanism of action of mesalamine is not fully understood, but
appears to be topical rather than systemic. Although the pathlogy of
inflammatory bowel disease is uncertain, both prostaglandins and leukotrienes
have been implicated as mediators of mucosal injury and inflammation.

12.3 Pharmacokinetics
Absorption: Mesalamine (5-ASA) administered as a rectal suppository
is variably absorbed. In patients with ulcerative colitis treated with
mesalamine 500 mg rectal suppositories, administered once every eight hours
for six days, the mean mesalamine peak plasma concentration (C_{max})
was 353 ng/mL (CV=55%) following the initial dose and 361 ng/mL (CV=67%)
at steady state. The mean minimum steady state plasma concentration (C_{min})
was 89 ng/mL (CV=89%). Absorbed mesalamine does not accumulate in the
plasma.
Distribution: Mesalamine administered as rectal suppositories
distributes in rectal tissue to some extent. In patients with ulcerative proctitis
treated with CANASA 1000 mg rectal suppositories, rectal tissue
concentrations for 5-ASA and N-acetyl-5-ASA have not been rigorously
quantiﬁed.
Metabolism: Mesalamine is extensively metabolized, mainly to N-
acetyl-5-ASA. The site of metabolization has not been elucidated. In patients
with ulcerative colitis treated with one 500 mg mesalamine rectal suppository
every eight hours for six days, peak concentration (C_{max}) of N-acetyl-5-ASA
ranged from 467 ng/mL to 1399 ng/mL following the initial dose and from
193 ng/mL to 1304 ng/mL at steady state.
Elimination: Mesalamine is eliminated from plasma mainly by urinary
excretion, predominantly as N-acetyl-5-ASA. In patients with ulcerative
proctitis treated with one mesalamine 500 mg rectal suppository every four
hours for six days, ≤12% of the dose was eliminated in urine as unchanged 5-
ASA and 8-77% as N-acetyl-5-ASA following the initial dose. At steady state,
≤11% of the dose was eliminated as unchanged 5-ASA and 3-35% as N-
acetyl-5-ASA. The mean elimination half-life was five hours (CV=73%) for
5-ASA and six hours (CV=63%) for N-acetyl-5-ASA following the initial
dose. At steady state, the mean elimination half-life was seven hours for both
5-ASA and N-acetyl-5-ASA (CV=102% for 5-ASA and 82% for N-acetyl-5-
ASA).

13 NONCLINICAL TOXICOLOGY
13.1 Carcinogenesis, Mutagenesis, Impairment of Fertility
Mesalamine caused no increase in the incidence of neoplastic lesions
over controls in a two-year study of Wistar rats fed up to 320 mg/kg/day of
mesalamine admixed with diet (about 1.7 times the recommended human
intra-rectal dose, based on body surface area).
Mesalamine was not mutagenic in the Ames test, the mouse lymphoma
cell (TK+) forward mutation test, or the mouse micronucleus test.
No effects on fertility or reproductive performance of the male and
female rats were observed at oral mesalamine doses up to 320 mg/kg/day
(about 1.7 times the recommended human intra-rectal dose, based on body
surface area).

13.2 Animal Toxicology and/or Pharmacology
Toxicology studies of mesalazine were conducted in rats, mice, rabbits
and dogs, and the kidney was the main target organ of toxicity. In rats,
adverse renal effects were observed at a single oral dose of 600 mg/kg (about
3.2 times the recommended human intra-rectal dose, based on body surface
area) and at IV doses of ≤214 mg/kg (about 1.2 times the recommended
human intra-rectal dose, based on body surface area). In a 13-week oral
gavage toxicity study in rats, papillary necrosis and/or multificol tubular
injury were observed in males receiving 160 mg/kg (about 0.86 times the
recommended human intra-rectal dose, based on body surface area) and in
both males and females at 640 mg/kg (about 3.5 times the recommended
human intra-rectal dose, based on body surface area). In a combined 52-week
toxicity and 127-week carcinogenicity study in rats, degeneration of the
kidneys and hyalinization of basement membranes and Bowman’s capsule
were observed at oral doses of 100 mg/kg/day (about 0.54 times the
recommended human intra-rectal dose, based on body surface area) and
above. In a 14-day rectal toxicity study of mesalazine suppositories in
rabbits, intra-rectal doses up to 800 mg/kg (about 8.6 times the recommended
human intra-rectal dose, based on body surface area) was not associated with
any adverse effects. In a six-month oral toxicity study in dogs, doses of 80
mg/kg (about 1.4 times the recommended human intra-rectal dose, based on
body surface area) and higher caused renal pathology similar to that described
for the rat. In a rectal toxicity study of mesalazine suppositories in dogs, a
dose of 166.6 mg/kg (about 3.0 times the recommended human intra-rectal
dose, based on body surface area) produced chronic nephritis and pyelitis.
In the 12-month eye toxicity study in dogs, keratoconjunctivitis sicca (KCS)

Reference ID: 3423668
occurred at oral doses of 40 mg/kg (about 0.72 times the recommended human intra-rectal dose, based on body surface area) and above.

14 CLINICAL STUDIES
Two double-blind, placebo-controlled, multicenter studies were conducted in North America in patients with mild to moderate active ulcerative proctitis. The primary measures of efficacy were the same in both trials (clinical disease activity index (DAI) and histologic evaluations). The DAI is a composite index reflecting rectal bleeding, stool frequency, mucosal appearance at endoscopy, and a physician’s global assessment of disease. The main difference between the studies was dosage regimen: 500 mg three times daily (1.5 g/d) in Study 1; and 500 mg twice daily (1.0 g/d) in Study 2. A total of 173 patients were studied (Study 1, N=79; Study 2, N=94). Eighty-nine (89) patients received mesalamine suppositories, and eighty-four (84) patients received placebo suppositories. Patients were evaluated clinically and sigmoidoscopically after three and six weeks of suppository treatment. In Study 1, patients were 17 to 73 years of age (mean = 39 years), 57% were female, and 97% were white. Patients had an average extent of proctitis (upper disease boundary) of 10.8 cm. Eighty-four percent (84%) of the study patients had multiple prior episodes of proctitis. In Study 2, patients were 21 to 72 years of age (mean = 39 years), 62% were female, and 96% were white. Patients had an average extent of proctitis (upper disease boundary) of 10.3 cm. Seventy-eight percent (78%) of the study patients had multiple prior episodes of proctitis.

Compared to placebo, mesalamine suppository treatment was statistically (p<0.01) superior to placebo in both trials with respect to improvement in stool frequency, rectal bleeding, mucosal appearance, disease severity, and overall disease activity at three and six weeks of treatment. The effectiveness of mesalamine suppositories was statistically significant irrespective of sex, extent of proctitis, duration of current episode, or duration of disease.

An additional multicenter, open-label, randomized, parallel group study in ninety-nine (99) patients diagnosed with mild to moderate ulcerative proctitis compared the clinical efficacy of the CANASA 1000 mg suppository to that of the CANASA 500 mg suppository. The primary measures of efficacy included the clinical disease activity index (DAI) and histologic evaluations. Patients were randomized to one of two treatment groups, with a dosage regimen of one 500 mg mesalamine suppository twice daily, morning and at bedtime, or one 1000 mg mesalamine suppository at bedtime for six weeks. Patients were evaluated clinically and sigmoidoscopically at three and six weeks of suppository treatment. Of the eighty-one (81) patients in the Per Protocol population, forty-six (46) patients received mesalamine 500 mg suppositories twice daily, and thirty-five (35) patients received mesalamine 1000 mg suppositories at bedtime.

The efficacy of the 1000 mg at bedtime treatment was not different at 6 weeks from the 500 mg twice daily treatment, and both were effective in the treatment of ulcerative proctitis. Both treatments resulted in a significant decrease at 6 weeks in DAI. In the 500 mg twice daily group, the mean DAI value decreased from 6.6 to 1.6, and in the 1000 mg at bedtime group, the mean DAI value decreased from 6.2 to 1.3 over 6 weeks of treatment, representing a decrease of greater than 75% in both groups. Seventy-eight percent (78%; 36/46) of patients in the 500 mg twice daily group and 86% (30/35) of the patients in the 1000 mg at bedtime group achieved a DAI score of less than 3 after 6 weeks of treatment.

16 HOW SUPPLIED/STORAGE AND HANDLING
CANASA 1000 mg suppositories for rectal administration are available as bullet shaped, light tan to grey suppositories containing 1000 mg mesalamine supplied in boxes of 30 and 42 individually plastic wrapped suppositories (NDC 58914-501-56 and 58914-501-42).

Store below 25°C (77°F), may be refrigerated. Keep away from direct heat, light or humidity. CANASA suppositories will cause staining of direct contact surfaces, including but not limited to fabrics, flooring, painted surfaces, marble, granite, vinyl, and enamel.

17 PATIENT COUNSELING INFORMATION
See FDA-approved patient labeling (Patient Information)

Instruct patients not to take CANASA if they have hypersensitivity to salicylates (e.g., aspirin) or other mesalamines.

Inform patients to let their physicians know all medications they are taking and if they:

- are allergic to sulfasalazine, salicylates or mesalamine;
- are taking non-steroidal anti-inflammatory drugs (NSAIDs) or other nephrotoxic agents;
- are taking azathioprine or 6-mercaptopurine;
- experience cramping, abdominal pain, bloody diarrhea, fever, headache or rash;
- have a history of myocarditis or pericarditis;
- have kidney or liver disease;
- have a history of stomach blockage;
- are pregnant, intend to become pregnant or are breast-feeding.

FDA-Approved Patient Labeling

Patient Information
Read the Patient Information leaflet that comes with CANASA before you start taking it and each time you get a refill. There may be new information. This leaflet does not take the place of talking with your doctor about your medical condition or treatment. If you have any questions about CANASA, ask your doctor or pharmacist.

What is CANASA? CANASA is a prescription medicine used to treat active ulcerative proctitis (ulcerative rectal colitis).

It is not known if CANASA is safe and effective for use for longer than 6 weeks.

It is not known if CANASA is safe and effective in children.

Who should not use CANASA?

Do not use CANASA if you are:

- allergic to medicines that contain salicylates, including aspirin.
- allergic to mesalamine or any of the ingredients in CANASA. See the end of this leaflet for a complete list of ingredients in CANASA.

Ask your doctor if you are not sure if your medicine is listed above.

What should I tell my doctor before using CANASA?

Before using CANASA, tell your doctor if you:

- have a history of allergic reaction to the medicine sulfasalazine (Azulfidine)
- have kidney problems
- have ever had inflammation of the sac around your heart (pericarditis).
- have any other medical condition
- are pregnant or plan to become pregnant. It is not known if CANASA can harm your unborn baby.
- are breastfeeding or plan to breastfeed. CANASA can pass into your milk. Talk to your doctor about the best way to feed your baby if you use CANASA.

Tell your doctor about all the medicines you take, including prescription and non-prescription medicines, vitamins and herbal supplements.

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

How should I use CANASA?

- Use CANASA exactly as prescribed by your doctor. Your doctor will tell you how long to continue using CANASA.
- CANASA comes as a suppository that you insert into your rectum.
- CANASA is used 1 time each day, at bedtime.
- After CANASA is inserted in your rectum, you should try to keep (retain) the suppository in your rectum for 1 to 3 hours, or longer if possible.
- CANASA can cause staining of surfaces including, clothing and other fabrics, flooring, painted surfaces, marble, granite, vinyl and enamel. Keep CANASA away from these surfaces to prevent staining.

What are the possible side effects of CANASA?

CANASA may cause serious side effects, including:

- Allergic type reactions. This can include sudden symptoms called “Acute intolerance syndrome.” When this happens, it is usually in people who have had an allergic reaction to medicines containing sulfasalazine. Stop using CANASA and tell your doctor right away if you get any of these symptoms:
  - cramps

Reference ID: 3423668
- stomach (abdominal) pain
- bloody diarrhea
- fever
- headache
- rash

- Inflammation of the sac around the heart (pericarditis). Tell your doctor right away if you get chest pain or shortness of breath. Your doctor may tell you to stop using CANASA if you get pericarditis.

The most common side effects of CANASA include:
- dizziness
- acne
- colitis (inflammation of the colon)
- rectal pain (pain in the final portion of the large intestine)
- fever
- rash

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

These are not all of the possible side effects of CANASA. For more information ask your doctor or pharmacist.

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

How should I store CANASA?
- Store CANASA below 77°F (25°C).
- CANASA may be refrigerated.
- Keep CANASA away from direct heat, light, or humidity.

Keep CANASA and all medicines out of the reach of children.

General information about CANASA
Medicines are sometimes prescribed for purposes other than those listed in a patient information leaflet. Do not use CANASA for a condition for which it was not prescribed. Do not give CANASA to other people, even if they have the same symptoms you have. It may harm them.

This leaflet summarizes the most important information about CANASA. If you would like more information, talk with your doctor. You can ask your doctor or pharmacist for information about CANASA that is written for health professionals.

For more information, go to www.canasa.com, or call 1-800-472-2634.

What are the ingredients in CANASA?
Active ingredients: Mesalamine
Inactive ingredients: Hard fat base

Distributed by:
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