VI.2 Elements for a Public Summary

VI.2.1 Overview of disease epidemiology

Peptic ulcer consists of a permanent, localized and in general isolated loss of substance from the stomach or duodenum mucosa, which is at least extended to muscularis mucosae. The incidence of the disease in the occidental world is high (6-15% of the population will suffer it in their lives). The prevalence of duodenal ulcer ranges between 1.4-1.8%, and incidence between 0.06 and 0.29%.
Peptic ulcer ethio-pathogenesis seems to be multi-factorial. The most important aggression mechanisms are of endogenous or exogenous origin:
• Endogenous factors: In the last 5 years, the presence of *Helicobacter pylori* has become accepted as the leading cause of peptic ulcer disease.
• Exogenous aggressive factor: NSAIDs due to their aggressive effect of which is partly as a result of the local inhibition of prostaglandin synthesis, endogenous substances responsible for the production of the protective gastric mucosal barrier.
Lansoprazole has been administered in combination with more than two antibacterial agents for ulcer healing (dual, triple and quadruple therapy). Lansoprazole monotherapy is ineffective in **Helicobacter pylori eradication**. The eradication rate is enhanced when more than one antibacterial agent is administered.
Lansoprazole is also indicated for the treatment of **reflux oesophagitis**. The most important factor contributing to erosion of the oesophageal mucosa in reflux oesophagitis is acid reflux from the stomach into the oesophagus. Thus, antisecretory agents such as Lansoprazole are well suited to the treatment of this disorder, as they decrease the acidity of the refluxed material.
Lansoprazole has also demonstrated effectiveness in the treatment of the **Zollinger-Ellison syndrome**. It results from excessive gastric acid secretion caused by gastrinsecreting tumour(s) of the pancreas and duodenum. In about 75% of patients, the syndrome is associated with peptic ulceration. For these patients, treatment involves not only the prevention of the tumour growth but also the control of the acid secretion.
Lansoprazole also reduces the acidity of the gastric medium when a patient is taking antiinflammatory drugs such as **NSAID**. By inhibiting the prostaglandin synthesis, the protective mucous barrier is weakly build and therefore mucosa cells can be injured.
Lansoprazole is approved in various countries in order to treat acid-related dyspepsia.

VI.2.2 Summary of treatment benefits

Lansoprazole formulation is developed as a delayed release product in order to protect the active substance from the acid environment of the stomach.
Lansoprazole is a well established product that has been marketed for more than a decade; in addition, clinical studies have confirmed its place in the management of acid-related disorders. Therefore, no new safety or efficacy studies have been conducted for the marketing authorisation application for Lansoprazole Liconsa 15mg and 30mg hard gastro-resistant capsules.

VI.2.3 Unknowns relating to treatment benefits

No other evidence of efficacy has been detected.

VI.2.4 Summary of safety concerns

Important identified risks

Risk	What is known	Preventability
Hypomagnesemia	Severe hypomagnesaemia has been reported in patients treated with PPIs like lansoprazole for at least three months, and in most cases for a year.	In most affected patients, hypomagnesaemia improved after magnesium replacement and discontinuation of the PPI. For patients expected to be on prolonged treatment or who take PPIs with digoxin or drugs that may cause hypomagnesaemia (e.g., diuretics), health care professionals should consider measuring magnesium levels before starting PPI treatment and periodically during treatment.
Osteopenia and risk of fractures	Proton pump inhibitors, especially if used in high doses and over long durations (>1 year), may modestly increase the risk of hip, wrist and spine fracture, predominantly in the elderly or in presence of other recognised risk factors.	Patients at risk of osteoporosis should receive care according to current clinical guidelines and they should have an adequate intake of vitamin D and calcium.
Hypersensitivity reactions	Hypersensitivity to the active substance or to any of the excipients.	Patients should inform the doctor in case of hypersensitivity reactions.
Substantial reduction of Atazanavir exposure	Lansoprazole should not be administered with atazanavir	Patient should not take lansoprazole with atazanavir

Important potential risks

Risk	What is known (Including reason why it is considered a potential risk)
Masking symptoms of malignant gastric tumour.	In common with other anti-ulcer therapies, the possibility of malignant gastric tumour should be excluded when treating a gastric ulcer with lansoprazole because lansoprazole can mask the symptoms and delay the diagnosis
Increase in Lansoprazol exposition due to hepatic dysfunction	Patients with moderate or severe liver disease should be kept under regular supervision and a 50% reduction of the daily dose is recommended.
Increase of intestinal bacterial microbiota and risk of gastrointestinal infections / colitis.	Treatment with proton pump inhibitors may possibly increase the risk of gastrointestinal infections such as Salmonella, Campylobacter and Clostridium difficile. Decreased gastric acidity due to any means, including proton pump inhibitors such as rabeprazole, increases counts of bacteria normally present in the gastrointestinal tract.
Possible drug interaction with medicinal products with PH dependent absorption and medicinal products metabolised by P450 enzymes	Lansoprazole may interact with these products. Patient should inform the doctor before staring therapy with rabeprazole.
Effects of other drugs on lansoprazole: Drugs which inhibit CYP2C19 and Drugs which induces CYP2C19 and CYP3A4	Lansoprazole may interact with these products. Patient should inform the doctor before staring therapy with rabeprazole.
Chronic use of PPIs and the risk of pneumonia	Patients on long-term treatment (particularly those treated for more than a year) should be kept under regular surveillance.

Missing information

Risk	What is known
Use in pregnancy and during lactation	*Pregnancy* There are no data on the safety of lansoprazole in human pregnancy. Lansoprazole is contraindicated during pregnancy. *Lactation* It is not known whether lansoprazole is excreted in human breast milk. Therefore lansoprazole should not be used during breast feeding.
Overdose exposure	The effects of overdose on lansoprazole in humans are not known (although the acute toxicity is likely to be low) and, consequently, instruction for treatment cannot be given.

VI.2.5 Summary of risk minimization measures by safety concern

Summary of Product Characteristics (SmPC) of lansoprazole provides physicians, pharmacists and other health care professionals with details on how to use the medicine, the risks and recommendations for minimising them. An abbreviated version of this in lay language is provided in

the form of the package leaflet (PL). All these risk minimization measures are given in SmPC and PL of rabeprazole.

This medicine has no additional risk minimization measures.

VI.2.6 Planned post authorisation development plan

No post authorisation study is planned for this product.

VI.2.7 Summary of changes to the Risk Management Plan over time

This section is not applicable as this is version 01 of RMP.