DEVELOPMENT OF AN ARTIFICIAL INTELLIGENCE SYSTEM FOR DETECTING CHRONIC ATROPHIC GASTRITIS BASED ON ENDOSCOPIC IMAGES

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Background

- *Gastric cancer* is the **leading cause of cancer-related** deaths in Chile and the **third worldwide**.
- **Early detection** significantly **improves 5-year survival** rates (over 90% when detected at early stages).
- Strategies such as endoscopy are effective but require significant resources.

Aim

Optimize patient screening through AI to reduce costs and improve diagnostic accuracy.

Objectives

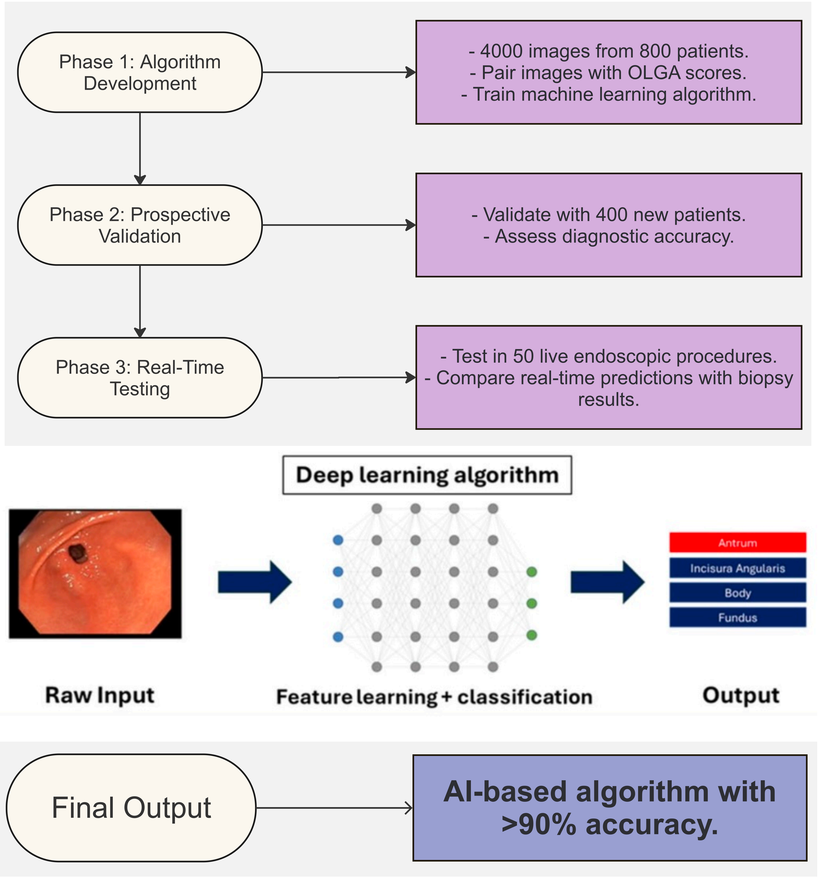
General Objective:

Develop and validate an *AI-based algorithm for the accurate diagnosis of gastric atrophy* (OLGA stages III-IV) in endoscopic images without the need for routine biopsies.

Specific Objectives:

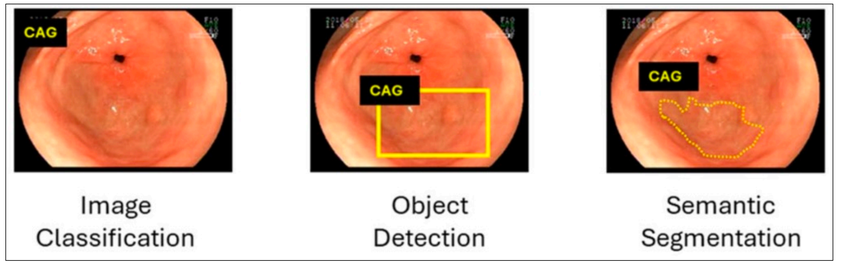
- Record endoscopic videos and determine the OLGA score in 800 patients.
- Develop and adjust the AI algorithm to achieve high accuracy.
- Validate the algorithm in a prospective cohort of 400 patients.
- Perform real-time analysis in 50 patients and compare it with biopsies.

Methods



Espected Results

1. High diagnostic accuracy (>90%) for detecting OLGA stages III-IV.
2. Reduction of routine biopsy-related costs and patient risks.
3. Improved identification of high-risk patients for targeted endoscopic surveillance.



Clinical Impact

This study seeks to deliver an AI-assisted diagnostic tool that allows non-expert endoscopists to accurately identify atrophic gastric mucosa and prioritize high-risk patients, contributing to the reduction of gastric cancer mortality