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# Chilean Program of Gastric Cancer Initiatives: Campaign of Nueva Imperial

Robinson González Donoso MD

Director of Chilean Program of Gastric Cancer Initiatives

Chairman of Chilean Association of Digestive Endoscopy

Vice Chairman of Chilean Society of Gastroenterology

Chairman of Stomach Committee of World Endoscopy Organization

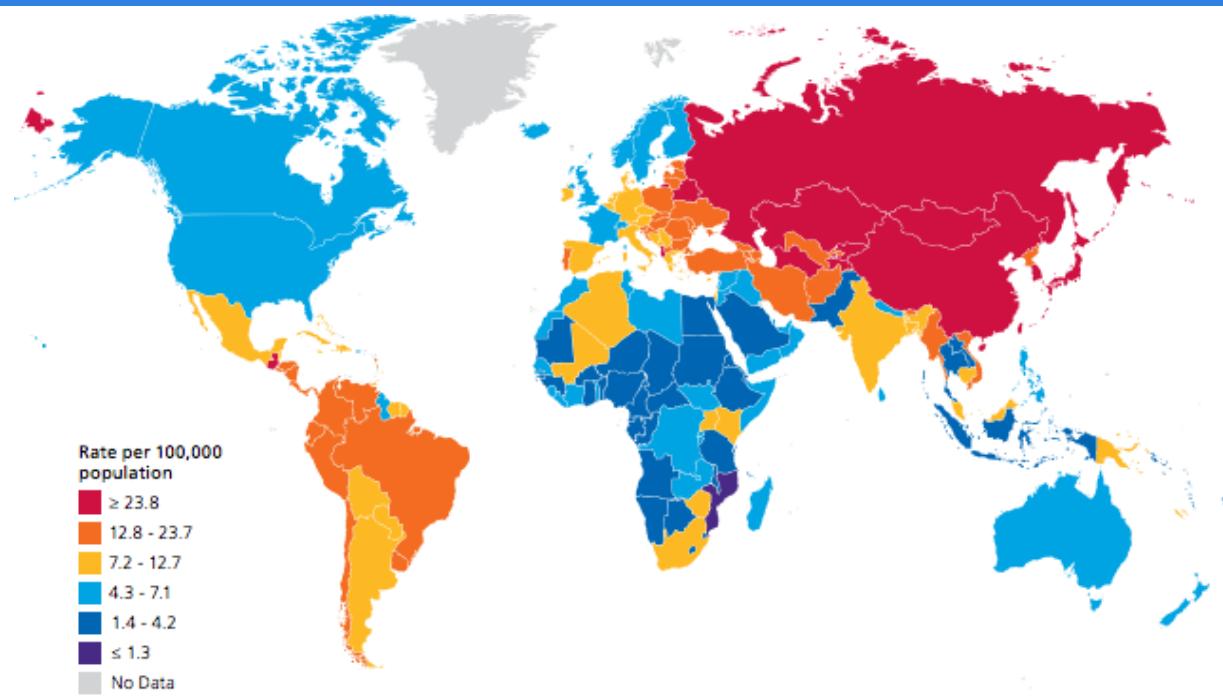
Associated Professor

Pontificia Universidad Católica de Chile

# Agenda

1. Background
2. What progress have we made in the last years?  
Chilean Program of Gastric Cancer Initiatives
3. Summary and Conclusions

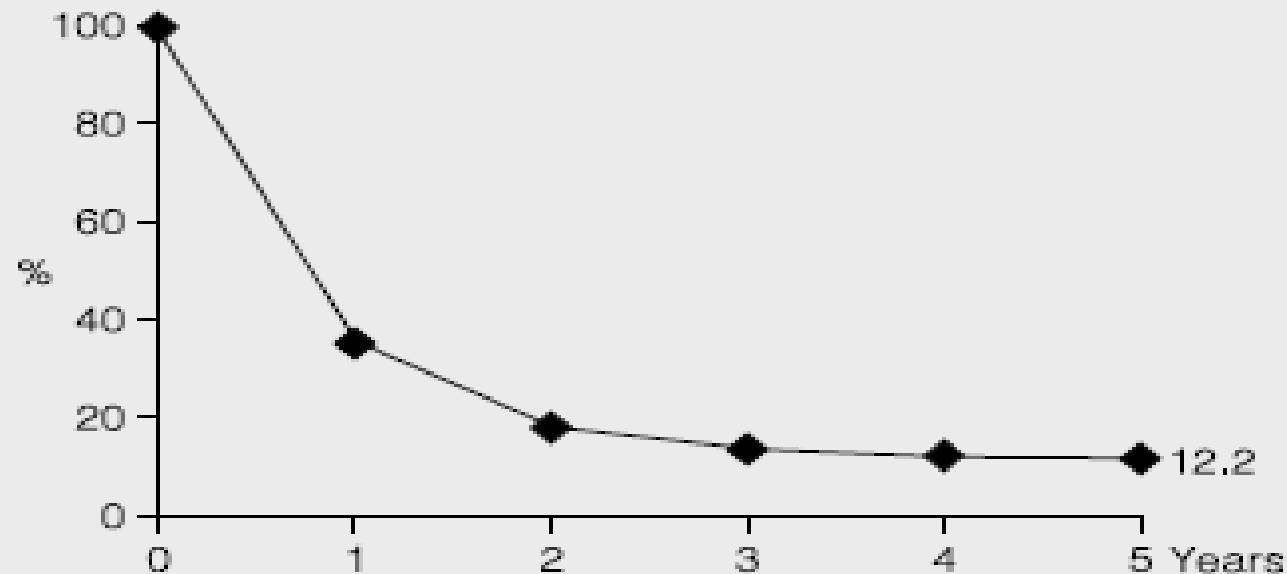
# Background



GC is the 1st cause of death for cancer among men and 3th in women  
Incidence 23,3/100.000 inhabitants, causing 3.300 deaths per year  
Incidence is higher in south Chile 30-35/100.000.

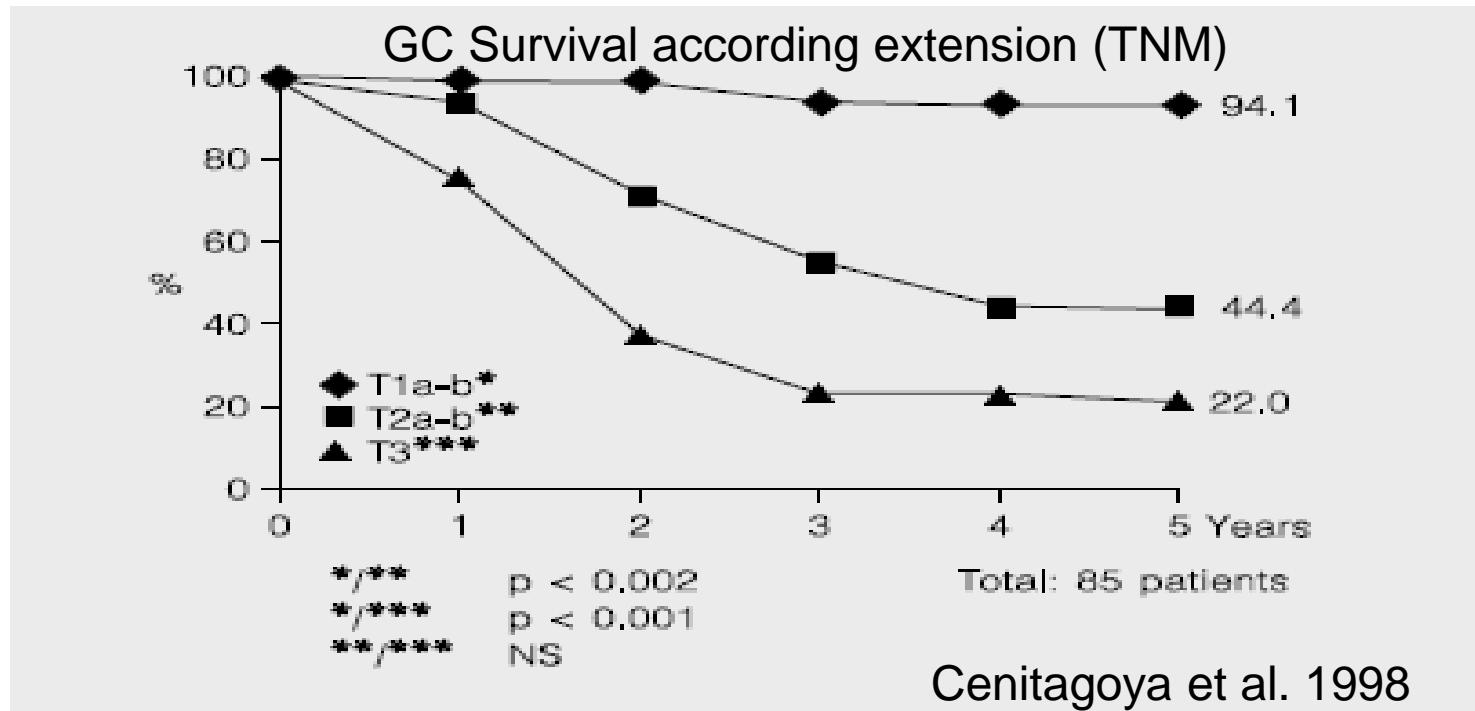
*\*Per 100,000, age standardized to the World Standard Population. Source: GLOBOCAN 2012*

# Background



**Gastric Cancer in Chile:  
5 year survival rate 12%**

# Background



**Rate of Early Gastric C. detection in Chile < 10%**  
**5 years Mortality Rate 85 - 90%**  
**Waiting list for Endoscopy 2-4 years**



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# Aims

- Never again Advanced Gastric Cancer
- Never again waiting list for endoscopy

# How we could do it?

## Guidelines and Consensus 2012 - 2014

# How we could do it?

## Guidelines and Consensus 2012 - 2014

CLINICAL TRIALS STUDY

### Management of *Helicobacter pylori* infection in Latin America: A Delphi technique-based consensus

*What is the role of *H. pylori* eradication in primary and secondary prevention of GC? What is appropriate age to eventually implement the protocol?*

**Primary prevention:** The consensus states that the potential benefit of eradicating *H. pylori* for the prevention of GC is highly suggested. However, there is insufficient evidence to justify large-scale implementation in the general population. Further studies should be performed on high-risk populations in Latin America to confirm the expected benefit and to evaluate the potential adverse effects. (Evidence level I, grade of recommendation C; Agreement  $4.5 \pm 0.5$ ).

ARTÍCULO ESPECIAL

Rev Med Chile 2014; 142: 1181-1192

**Diagnóstico precoz de cáncer gástrico. Propuesta de detección y seguimiento de lesiones premalignas gástricas: protocolo ACHED**

ANTONIO ROLLÁN<sup>1</sup>, PABLO CORTÉS<sup>1</sup>, ALFONSO CALVO<sup>2</sup>, RAÚL ARAYA<sup>3</sup>, MARÍA ESTER BUFADEL<sup>4</sup>, ROBINSON GONZÁLEZ<sup>5</sup>, CAROLINA HEREDIA<sup>6</sup>, PABLO MUÑOZ<sup>7</sup>, FREDDY SQUELLA<sup>8</sup>, ROBERTO NAZAL<sup>9</sup>, MARÍA DE LOS ÁNGELES GATICA<sup>10</sup>, JAQUELINE GOBELET<sup>11</sup>, RENÉ ESTAY<sup>10</sup>, RAÚL PISANO<sup>11</sup>, LUIS CONTRERAS<sup>12</sup>, INGRID OSORIO<sup>13,14</sup>, RICARDO ESTELA<sup>14</sup>, FERNANDO FLUXÁ<sup>15</sup>, ADOLFO PARRA-BLANCO<sup>8</sup>

**Recommendations of the Chilean association for digestive endoscopy for the management of gastric pre-malignant lesions**

An expert panel analyzed the available evidence and reached a consensus to release 24 recommendations for primary and secondary prevention of gastric cancer (CG) in symptomatic patients, with indication for upper GI endoscopy. The main recommendations include (1) Search for and eradicate *H. pylori* infection in all cases. (2) Systematic gastric biopsies (Sydney protocol) in all patients over 40 years of age or first grade relatives of patient with CG, to detect gastric atrophy, intestinal metaplasia or dysplasia. (3) Incorporate the OLGA system (Operative Link on Gastritis

<sup>1</sup>Unidad de Gastroenterología, Clínica Alemana de Santiago, Facultad de Medicina Clínica Alemana-Universidad del Desarrollo, Santiago, Chile.  
<sup>2</sup>Unidad de Endoscopia CRS San Rafael y Endoscopía Terapéutica Hospital Dr. Sótero del Río, Santiago, Chile.  
<sup>3</sup>Unidad de Gastroenterología y Servicio de Endoscopía, Hospital Militar de Santiago, Chile.  
<sup>4</sup>Sección de Gastroenterología, Hospital Clínico Universidad de Chile y Clínica Avansalud, Integramedica, Santiago, Chile.  
<sup>5</sup>Departamento de Gastroenterología, Facultad de Medicina, Pontificia Universidad Católica de Chile, Santiago, Chile.  
<sup>6</sup>Servicio de Endoscopia, Hospital Militar de Santiago, Facultad de Medicina, Universidad de los Andes, Santiago, Chile.  
<sup>7</sup>Sección de Gastroenterología, Hospital Clínico Universidad de Chile, Santiago, Chile.  
<sup>8</sup>Servicio de Gastroenterología Clínica Indisa y Universidad Andrés Bello, Santiago, Chile.  
<sup>9</sup>Hospital San José e Integrmedica, Santiago, Chile.  
<sup>10</sup>Clinica Santa María y Hospital del Salvador, Santiago, Chile.  
<sup>11</sup>Unidad de Anatomía Patológica, Hospital San Juan de Dios, Santiago, Chile.  
<sup>12</sup>Laboratorio de Anatomía Patológica C y S, Santiago, Chile.  
<sup>13</sup>Hospital El Pino, Santiago, Chile.  
<sup>14</sup>Instituto Chileno-Japonés de

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# Best you can!!

## New Endoscopy Protocol

### Before Procedure

E-learning system for endoscopic diagnosis of early gastric cancer (EGC) by white-light endoscopy



"quiet and clean stomach"

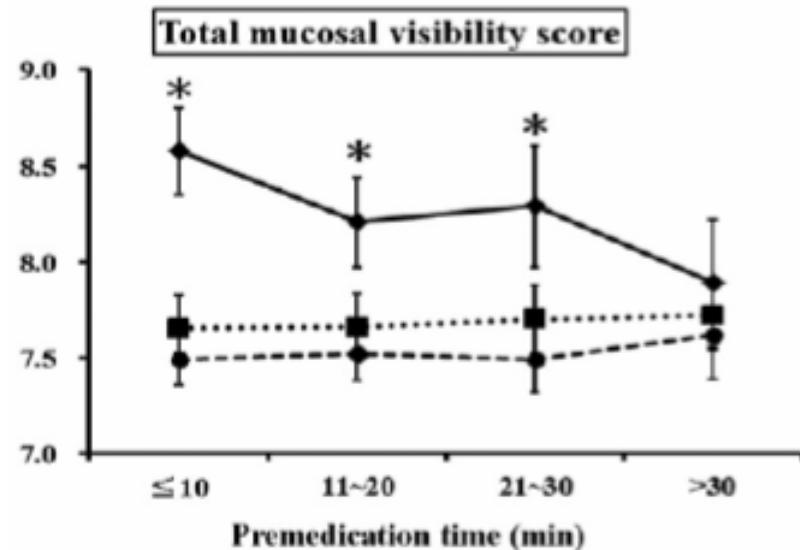
Simeticone

Pronase

Acetyl Cysteine

Scopolamine

White Light E 77-84% GCD  
Chromoendoscopy BLI (Eluxeo 7000)  
(conventional-digital)  
High Definition  
Magnification



# Best you can!!

## New Endoscopy Protocol

### During the Procedure

#### Systematic Screening protocol for the Stomach (SSS)

1. Systematic-Progressive-Documented

2. Time: "All you need"

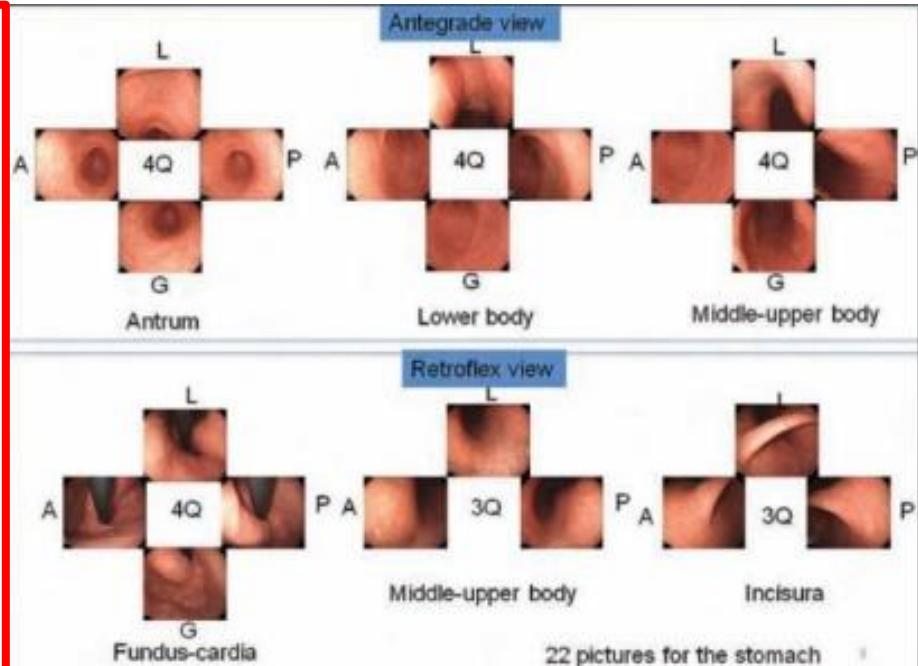
At least 8 minutes

2 min Intubation mouth-duodenum

4 min SSS

2 min Esophagus 1 min more for every

1 Cm of Barrett



**Lesions are visible but we do not see them, “we must retrain our eyes”**

**Best Endoscopic Partners: International Experts**

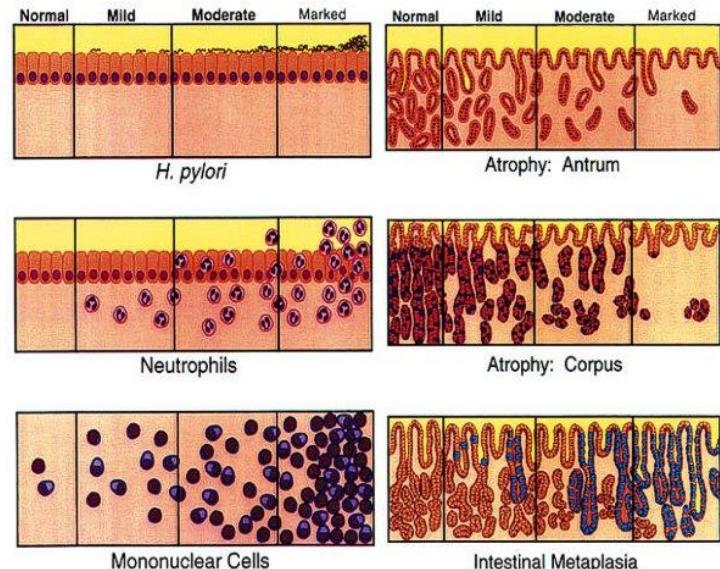
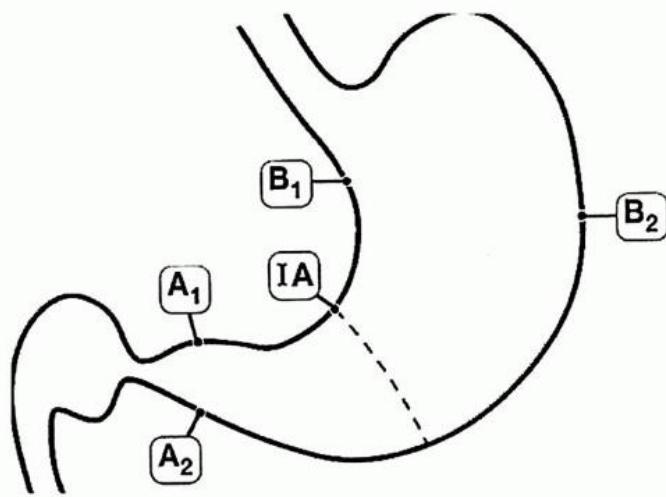
# Endoscopy and Preneoplastic Lesions

## Kyoto global consensus report on *H pylori* gastritis

Conventional endoscopy is, in most hands, an inadequate tool for diagnosing atrophy and intestinal metaplasia and therefore it remains mandatory that a biopsy is carried out, allowing histomorphological assessment of the gastric mucosa according to the Sydney classification.<sup>19 20</sup>

# Histology Evaluation and Preneoplastic Lesions

## Sydney System



The updated Sydney system is the most widely used classification of Gastritis, but ...  
It can not predict Gastric Cancer risk

Dixon *et al.*, American J of Surg Pathol, 1996



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# OLGA (Operative Link of Gastritis Assessment)

		CORPUS			
		No Atrophy (score 0)	Mild Atrophy (score 1)	Moderate Atrophy (score 2)	Severe Atrophy (score 3)
A N T R U M	No Atrophy (score 0) (including incisura angularis)	STAGE 0	STAGE I	STAGE II	STAGE II
	Mild Atrophy (score 1) (including incisura angularis)	STAGE I	STAGE I	STAGE II	STAGE III
	Moderate Atrophy (score 2) (including incisura angularis)	STAGE II	STAGE II	STAGE III	STAGE IV
	Severe Atrophy (score 3) (including incisura angularis)	STAGE III	STAGE III	STAGE IV	STAGE IV

Histological assessment systems like OLGA or OLGIM are useful to score the risk of Gastric Cancer development

Rugge M, Gastroenterology 2005

# Colaboration (2014-015)

## ACHED (Volunteers Endoscopists)

Campaigns Curanilahue

Guidelines ACHED 2012-2014

## Ministry of Health

Guidelines MINSAL 2006-2014

IX Region of Araucanía  
High Risk of GC

## Foundation Desafío – Foundation SC

Articulating the public and private services to help areas of vulnerability

## Medical Equipment ++ Zepeda

Permanent support to the Community

**City:  
Nueva  
Imperial**

Waiting list Endoscopy > 2000 pctes  
2-4 years



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# Gastric Cancer: Campaign of Nueva Imperial 2016 (4 weeks)

H. of Nueva Imperial (IX región)



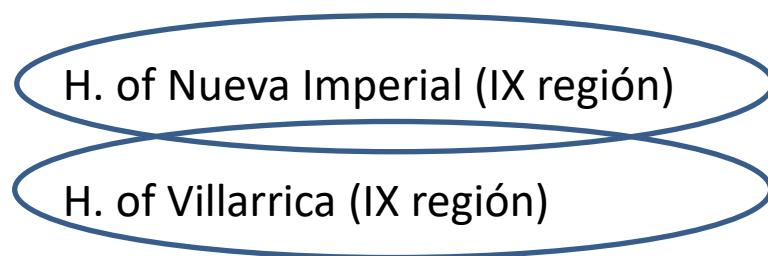
Vulnerability  
High rate of Gastric Cancer  
Waiting list of endoscopy > 4yrs.



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# Gastric Cancer: Campaign of Nueva Imperial 2017 (8 weeks)

## HOSPITALS (NETWORK)



Vulnerability  
High rate of CG (25-35 /100.000)



# Gastric Cancer: Campaign of Nueva Imperial 2018 (9 weeks)

## HOSPITALS (NETWORK)

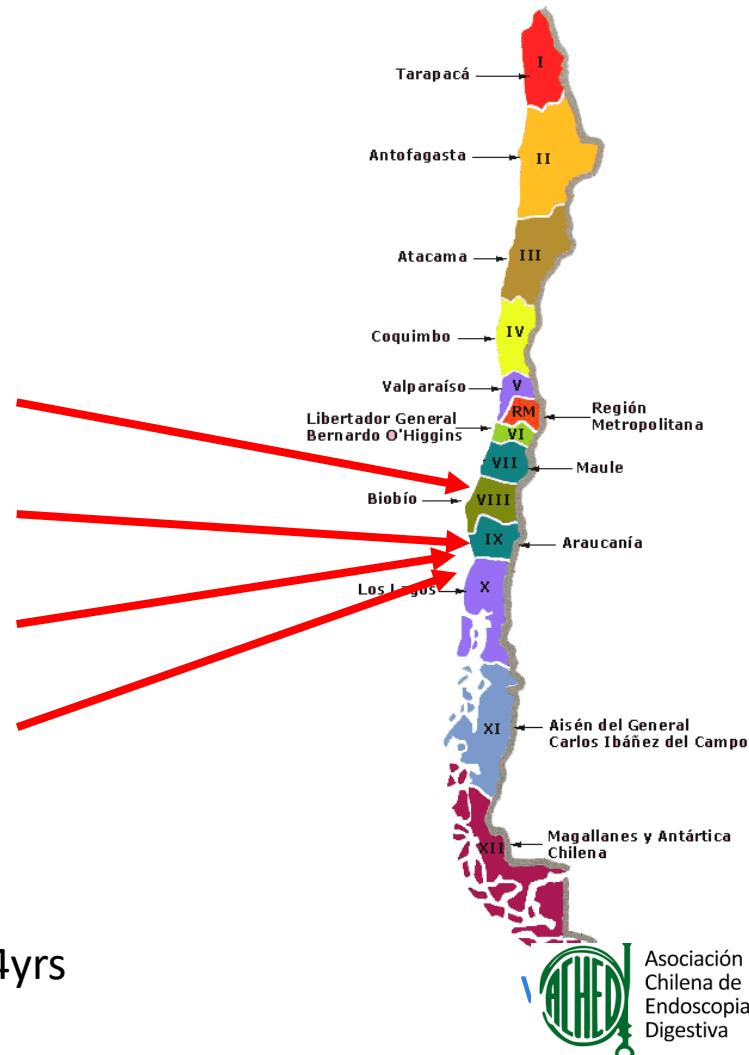
H. De Curanilahue (VIII región)

H. de Nueva Imperial (IX región)

H. de Villarrica (IX región)

H. De Victoria (IX región)

Vulnerability  
High rate of Gastric Cancer  
waiting list of endoscopy > 4yrs



# Summary and Conclusions

Numbers of Upper Gastro Intestinal Endoscopies (UGIE) performed in: 2016 (4 weeks) 2017 (8 weeks) 2018 (9 weeks) Numbers of UGIE performed in Three Years Campaign (2016-17-18)	750 1017 840 (On going, 6th week) 2607 
Numbers of Hospital involved in: Two Years Campaign (2016-17) 2018	2 4
Number of Volunteered Endoscopists: 2016 2017 2018 Estimated Number of Endoscopist in Chile	42 (42/400 = 10,5% of the Endoscopist in Chile) 62 (62/400 = 15,5% of the Endoscopist in Chile) 88 (88/400 = 22 % of the Endoscopist in Chile) 400 
Number of International Endoscopist: 2016 2017 2018	0 4 5 
Waiting List for UGIE Before Campaigns Waiting List for UGIE After two Campaigns	2-4 years <3 months 
Number of Gastric Cancer (GC) (2016-17) Number of Early Gastric Cancer (EGC) (2016-17) Number of Advanced Gastric Cancer (AGC) (2016-17) % of GC detected as EGC (2016-17) Previously Reported % og GC detected as EGC in Chile	6 (0,3 %) 4 (0,22 %) 2 (0,11 %) 66,6 %  10 %

# Summary and Conclusions

- Clinical Improvements
  - 1767 endoscopies were performed
  - 4/6 early Gastric Cancer were detected (66%)
  - 10 - 15 % of the patients have very high risk preneoplastic lesions, to concentrate resources in follow up.
- Structural Improvements of the Health System
  - Resolution of endoscopy waiting list.
    - It is a standardized model, it could be replicated in other areas in our country.
    - A network of 4 hospitals has been developed, with a common endoscopy and biopsy protocol to detect early gastric cancer and preneoplastic lesions.
    - 5 other hospitals have applied to participate in the Project (2019-2020)

# Summary and Conclusions

- Structural Improvements of the System
  - Development of Local Endoscopy Unit
    - Core: Endoscopists - Nurses - Family MD - Pathologists
    - Commitment of the hospital authorities to provide the necessary endoscopist hours and equipment to keep the endoscopy waiting list resolved.
  - Standardized and Protocolized endoscopy of high quality.
- Training by experts (“TTT”):
  - Five consulting foreign endoscopists (covered all weeks): feedback at endoscopy room
  - Daily discussions sessions of images of the day with an International Expert
  - Almost 90 endoscopist have taken part in the Campaigns (20% of all endoscopist in Chile)
- Research (Local Projects - Collaboration with other foreign institutions (NIH) )

# Gastric Cancer: Campaign of Nueva Imperial 2019

## HOSPITALS (NETWORK)

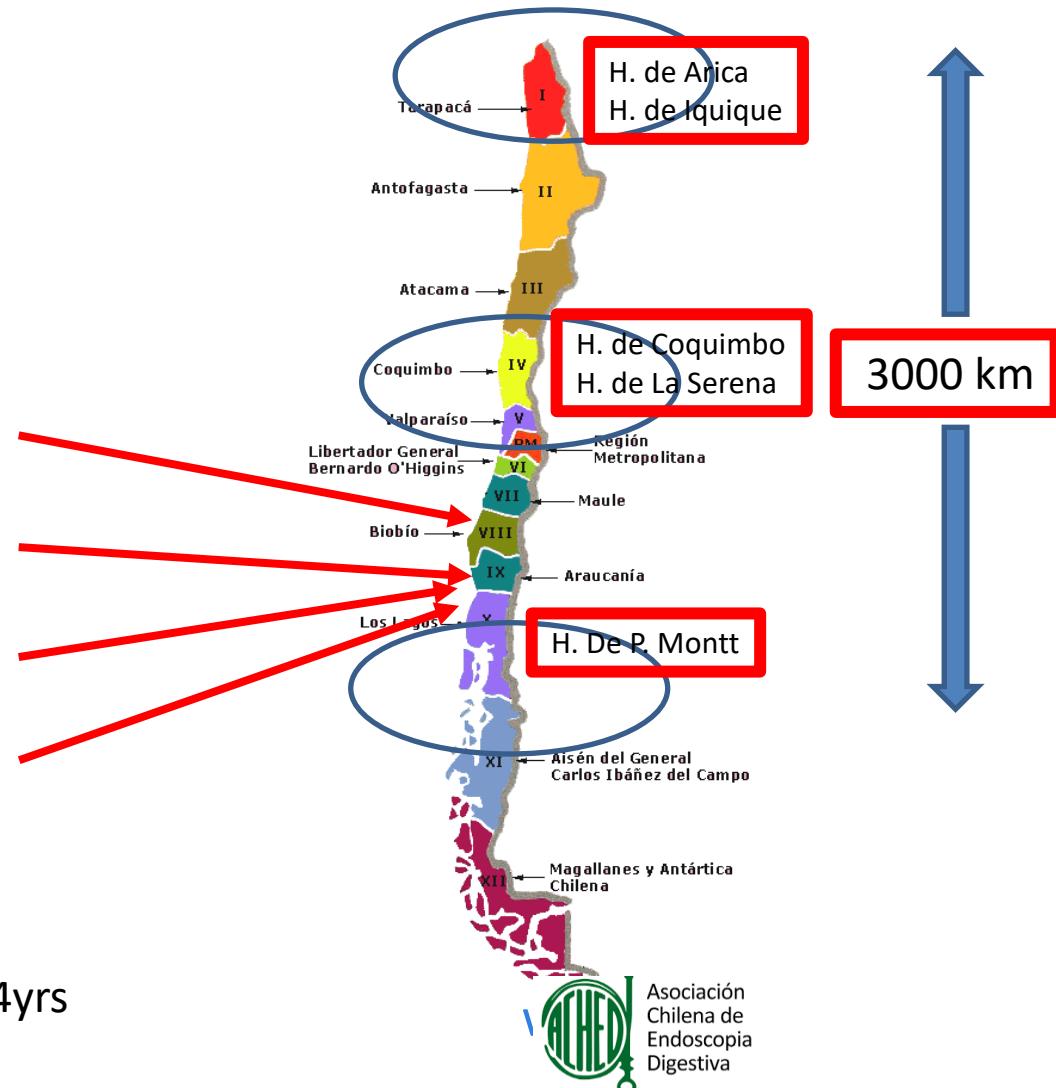
H. De Curanilahue (VIII región)

H. de Nueva Imperial (IX región)

H. de Villarrica (IX región)

H. De Victoria (IX región)

Vulnerability  
High rate of Gastric Cancer  
waiting list of endoscopy > 4yrs



# Gratitud

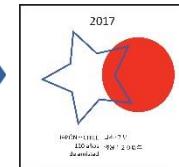


SC  
Soluciones colaborativas



++zepeda  
TRADICIÓN EN SERVICIO

ACCDIS  
ADVANCED CENTER FOR CHRONIC DISEASES



**Local Endoscopists (ACBED):** Heredia C, González R, Cortés P, Heredia C, Araya R, Bufadel ME, Rollan A, Espino A, Stock R, Donoso A, Navarro A, Rueda C, Monrroy H, Vial P, Sáenz M, Bustos C, Muñoz P, Sandoval A, Sharp A, Agüero C, Valderrama R, Robles I, Pedrero P, Valenzuela C, Jorquera A, Biel F, Ross G, Sierralta A, Naranjo J, Cordero J, Hofmann E, Wolff R, Ginesta A, Silva V, Hernández R, Rey P, Soto C, Pérez C, Obaid I, Correa A, Nachari I, Delgado G, Ortega J, Bresky G, Villasmil M, Copelli L, Pinto J, Cruz R, Aravena E, Miquel J, Arrese M, Flandez J, Ibáñez P, Piraud J, Riquelme F, Moscoso F, Mancilla R, Alvarez M, González M, Calixto D, Serrano C, Montenegro C, Aruta C, Riquelme A, Zepeda, Morales E, Benitez C,

**Internationals Endoscopic Experts:**

Parra A ([UK](#)), Ishida T ([Japan](#)), Odagaki T ([Japan](#)), Moriyama T ([Japan](#)), Kanesaka ([Japan](#)), Yao K ([Japan](#)).

## Pathologists

**Universidad de la Frontera:** Araya JC, Bellolio E, Villaseca MA.

**U de Chile:** Carrasco G.

**H. De Curanilahue:** Claudia Cabezas

**H. De Victoria:** Bolivar Lee,

**Colaborator Vanderbilt University (USA):** Piazuelo B

## Researchers

**PUC, Chile:** Alarcón A, Contreras D, Maturana MJ, Rodríguez A, Corvalan A.

**NIH (USA):** Camargo C, Abnet C.

**U del Norte:** Giuliano Bernal

**U de La Frontera:** Monica Vazquez

**Foundation Soluciones Colaborativas:** Painemal A, Contreras J, Domeyko I, Calvo S.

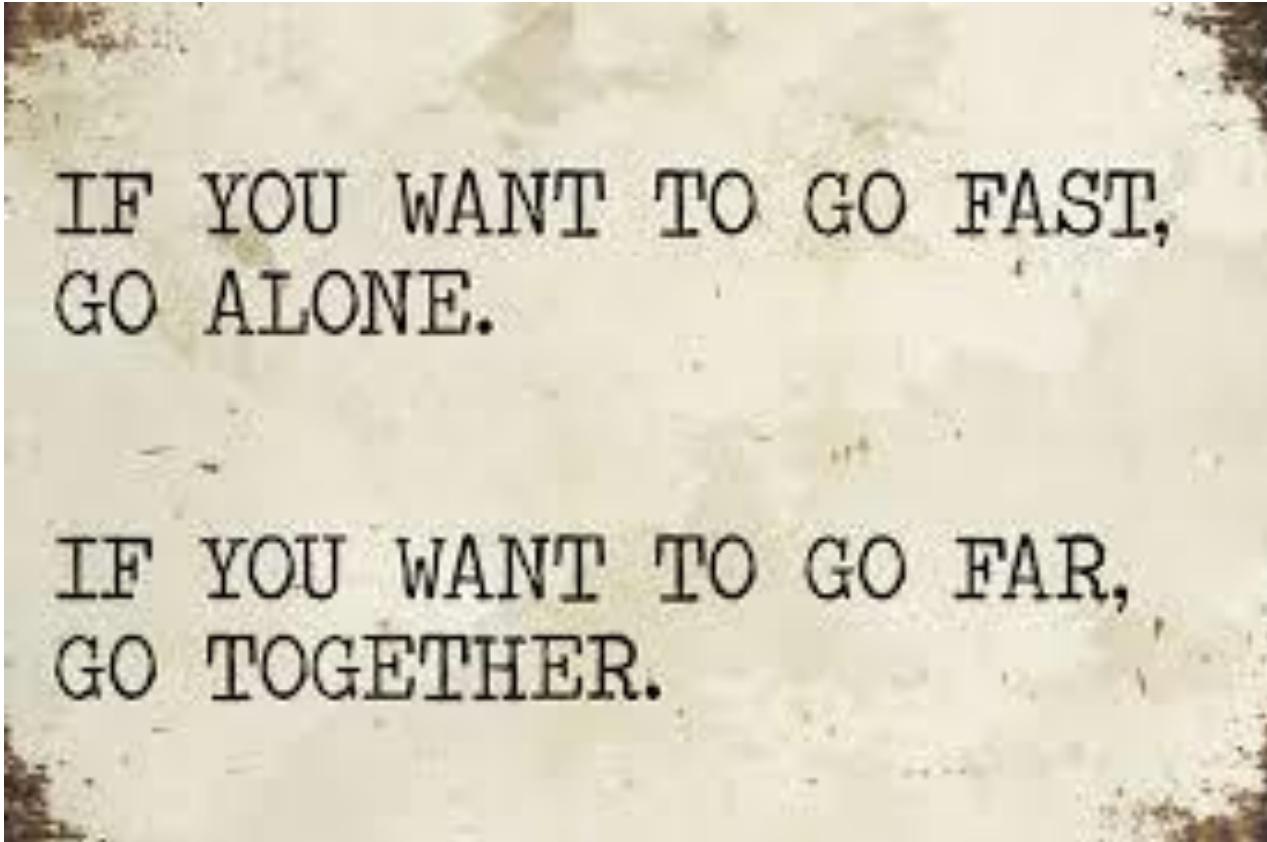
**Engineer:** Zepeda A

**Analysis and evaluation of data :** Padilla O., Contreras D.



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# Gratitude



IF YOU WANT TO GO FAST,  
GO ALONE.

IF YOU WANT TO GO FAR,  
GO TOGETHER.



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