



WEO

The voice of world
endoscopy

Territorial equity in colonoscopy KPI in a national screening program

Antoni Castells, MD, PhD

Gastroenterology Department, Clínic Barcelona, Catalonia





Catalonia

- Surface: 32,113 Km²
- Population: 7,977,132 inhabitants
- GDP: 229,418 M€
- Rural and urban demography
- Unemployment: 8.4%
- Immigration: 16.3%



Societat
Catalana de
Digestologia

Strategic plan to promote **territorial equity** in attending patients with digestive diseases in Catalonia (2017→)



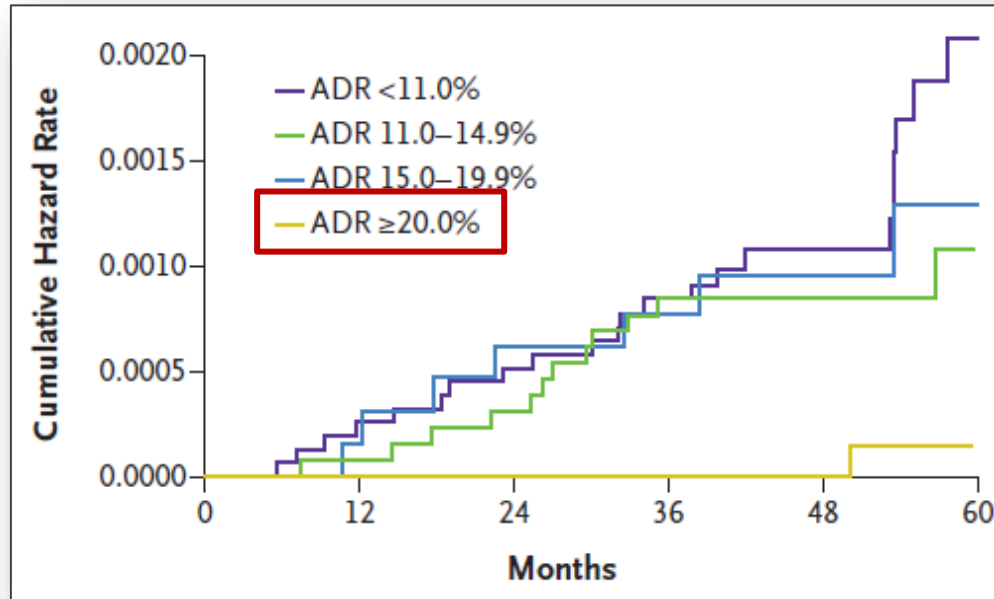
Strategic plan to promote **territorial equity** in attending patients with digestive diseases in Catalonia (2017→)

Indicators

- 1 Variability in the adenoma detection rate (ADR) within the Catalan Colorectal Cancer Screening Program.**
- 2 Variability in the treatment of large polyps detected within the Catalan Colorectal Cancer Screening Program.*
- 3 Variability in mortality associated with non-hospital related gastrointestinal bleeding.*
- 4 Variability in the rate of liver transplant indication.*

Quality in colonoscopy

Interval cancer according to endoscopist's adenoma detection rate (ADR)



Kaminski & Regula *et al.* NEJM 2010



ADR as quality indicator: correlation between screening strategies

Colonoscopy-based
screening

20%

Fecal immunochemical test
screening

40% (IC 95%, 35-57%)

**Quality KPI in the Catalan CRC
Screening Program: ADR $\geq 40\%$**

¹Cut-off, 15 μg Hb/g of feces
Results adjusted by age, gender and center

Cubiella & Castells *et al.* United European Gastroenterol J 2017



Aim

To evaluate if there were differences in **ADR among endoscopy units participating in the Catalan Colorectal Cancer Screening Program.**



Patients and Methods

- **Evaluated period:** 2018 and 2019
- **Participating endoscopy units:** 40 (7 health regions)
- **No. of colonoscopies evaluated:** 37,149
- **Source:** Catalan CRC Screening Program database
- **ADR definition:** no. of colonoscopies with ≥ 1 adenoma \div no. of colonoscopies performed by each endoscopist
- **ADR per endoscopy unit and health region:** mean ADR of all endoscopists
- **Sensitivity analyses:**
 - Excluding colonoscopies with poor bowel preparation
 - Limiting the analysis to endoscopists performing ≥ 30 colonoscopies
- **Variability among endoscopy units:** logistic regression



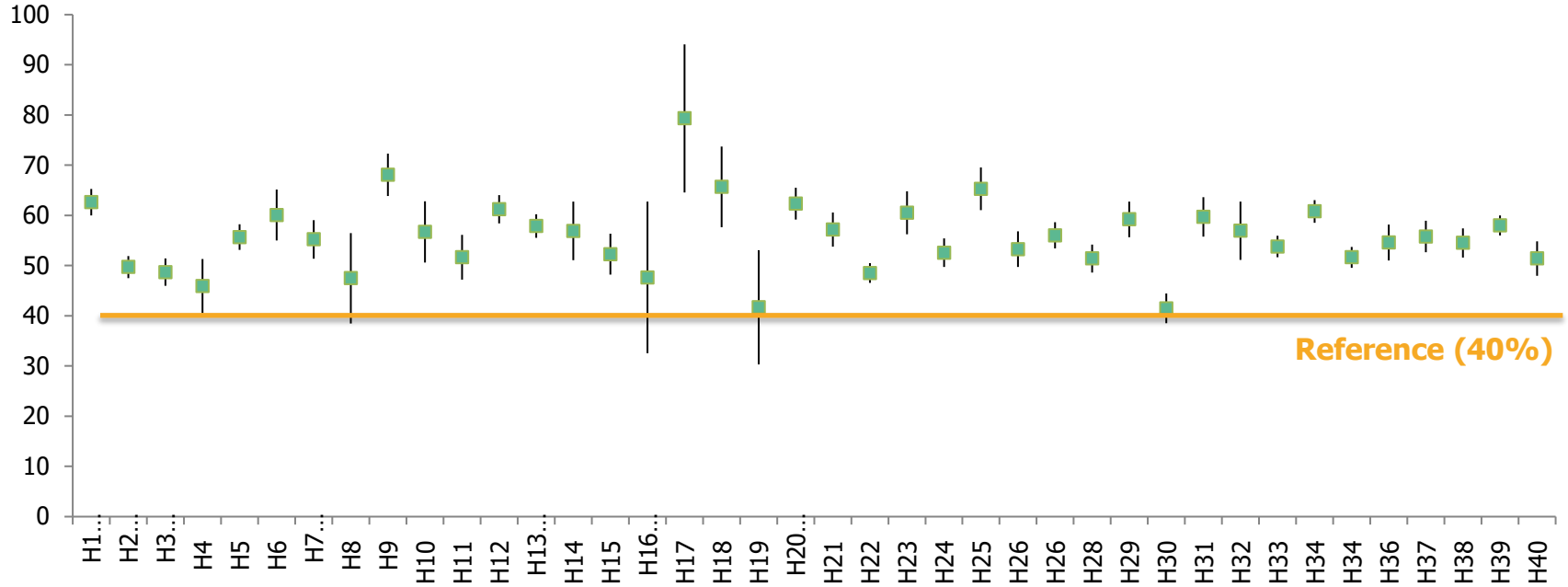
Results

Health region	ADR	95% CI
Terres de l'Ebre	63%	60-65%
Lleida	50%	48-52%
Camp de Tarragona	53%	51-54%
Girona	59%	57-60%
Catalunya central	56%	55-58%
Alt Pirineu i Aran	58%	52-64%
Barcelona	55%	54-55%
Total	55%	54-55%



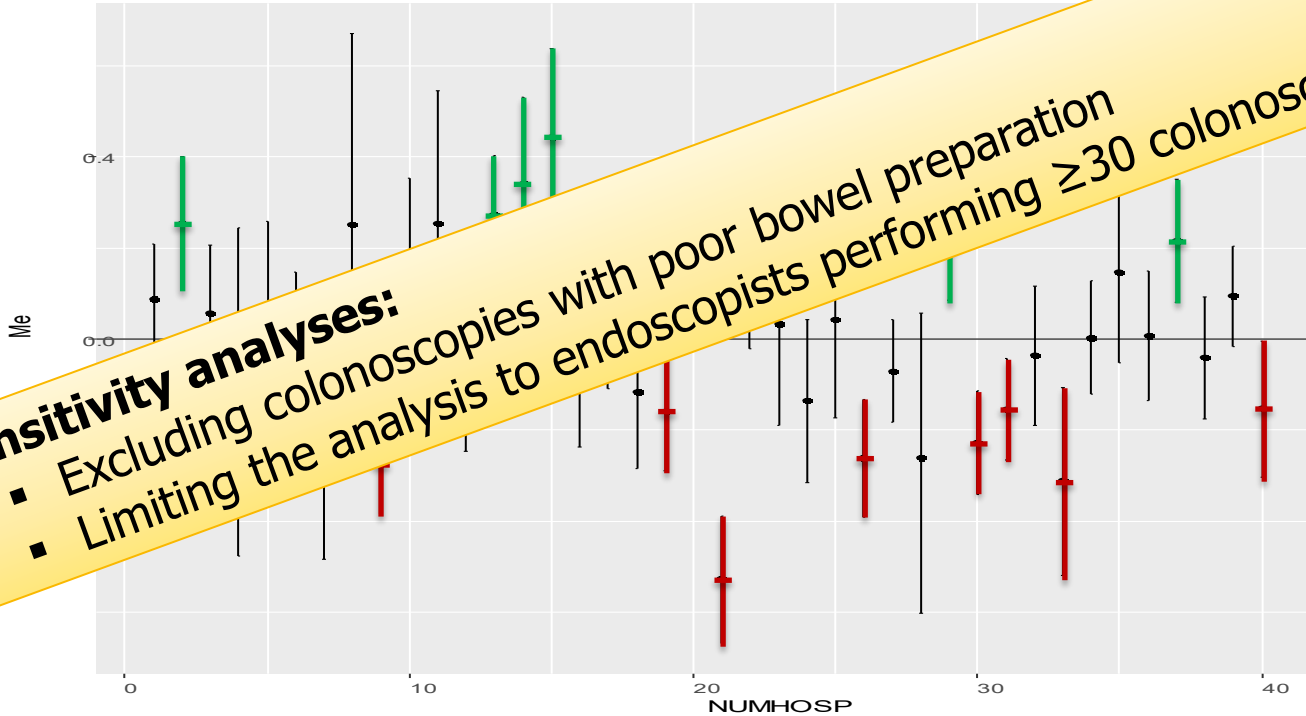
Results

ADR (95% CI) by endoscopy unit



Results

Variability among endoscopy units



Sensitivity analyses:

- Excluding colonoscopies with poor bowel preparation
- Limiting the analysis to endoscopists performing ≥ 30 colonoscopies



Summary

- **Quality of colonoscopy**, measured by the **ADR**, in the Catalan CRC Screening Program is **satisfactory**.
- All evaluated endoscopy units have a mean ADR above the threshold of reference (40%), thus suggesting **territorial equity with respect to the quality of colonoscopy**.
- There is **variability among endoscopy units** regarding the mean ADR, some of them significantly underperforming.
- **Relevance of monitoring quality KPI** in population-based, organized screening programs.





WEO

World Endoscopy
Organization

