WISE
CANCER SCREENING & PHARMACOTHERAPY
IN GASTROENTEROLOGY

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Czech Republic

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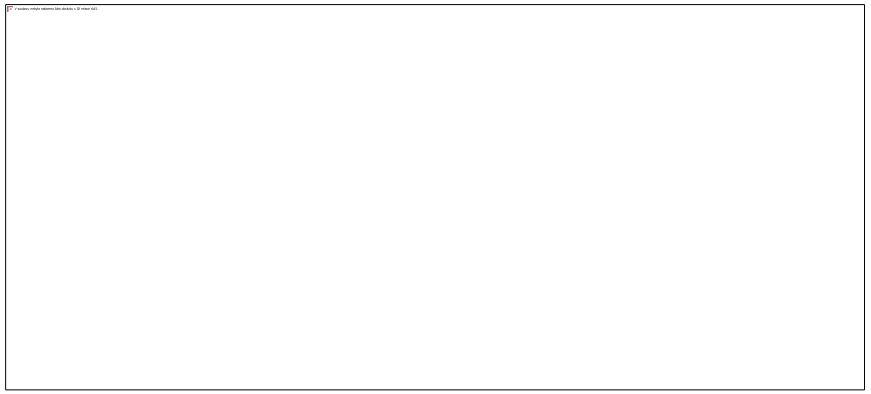

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Agenda:

1. **Colorectal cancer screening programme** – limits?

2. **Proton pump inhibitors** overprescription and deprescribing

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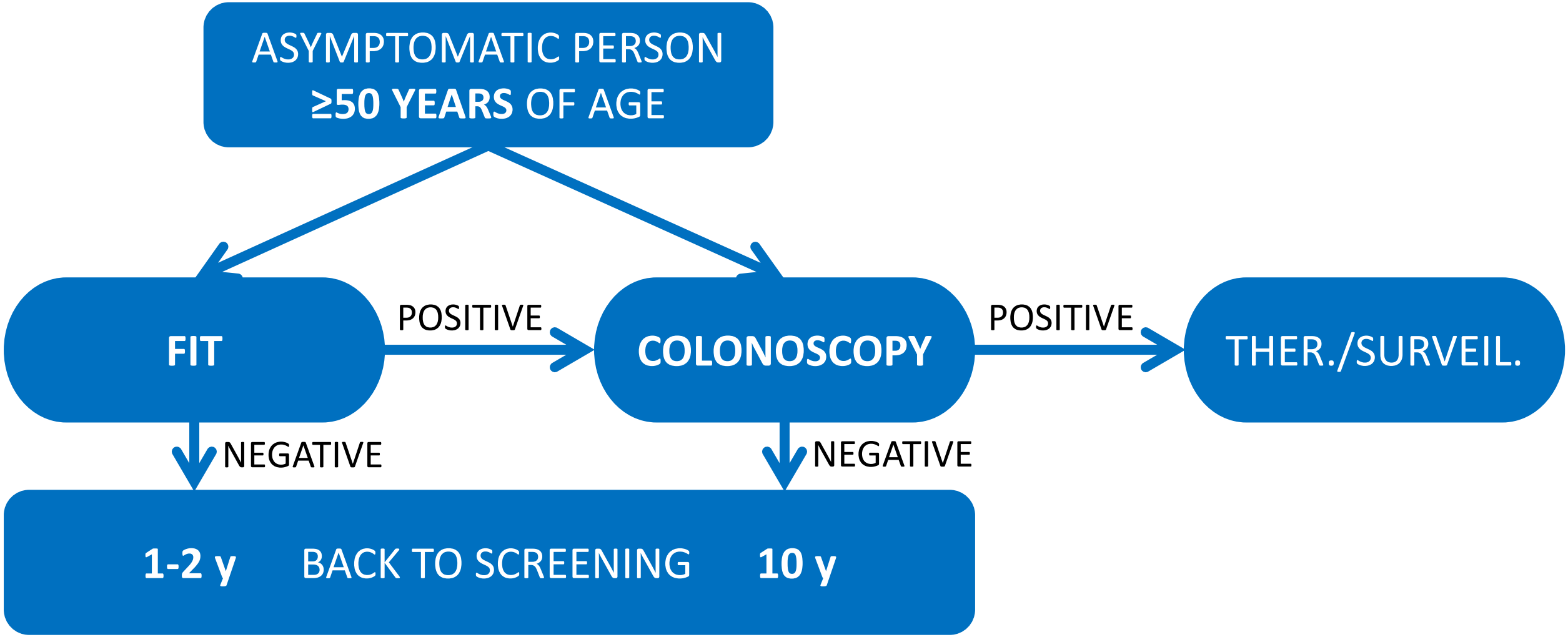
National Screening Programme in the Czech Republic:

History:

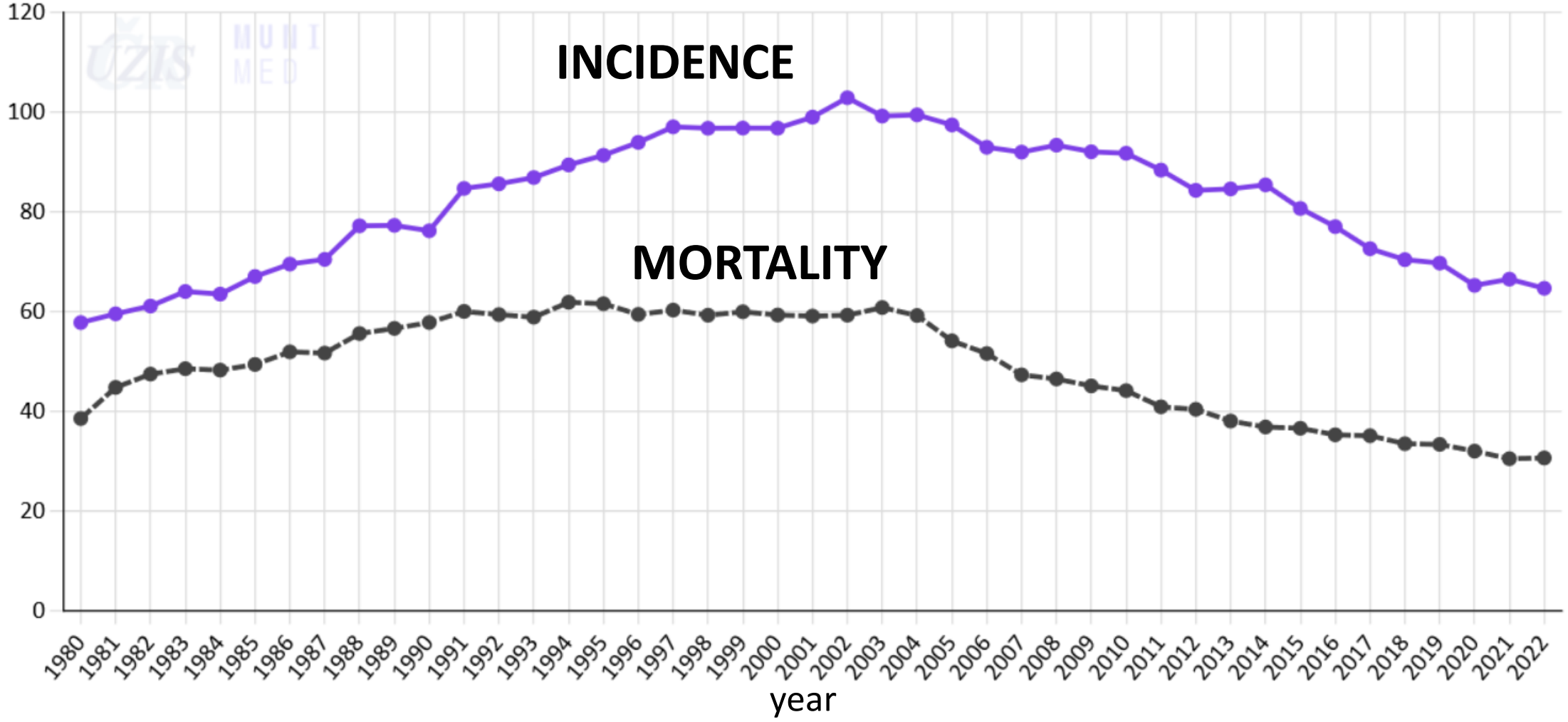
- **2000: GP prevention: gFOBT in 2y interval from 50 years of age**
- **2006:** Registry of preventive colonoscopies (on-line database)
- **2010: screening colonoscopy from 55 years of age**, gynecologists involved
- **2014: active adressed invitations** (population programme), ~~gFOBT~~ → **FIT**
- **2020: screening colonoscopy from 50 years of age**, COVID-19 pandemy
- **2022: quality indicators** (ADR, total colonoscopies, bowel preparation)

National Screening Programme in the Czech Republic:



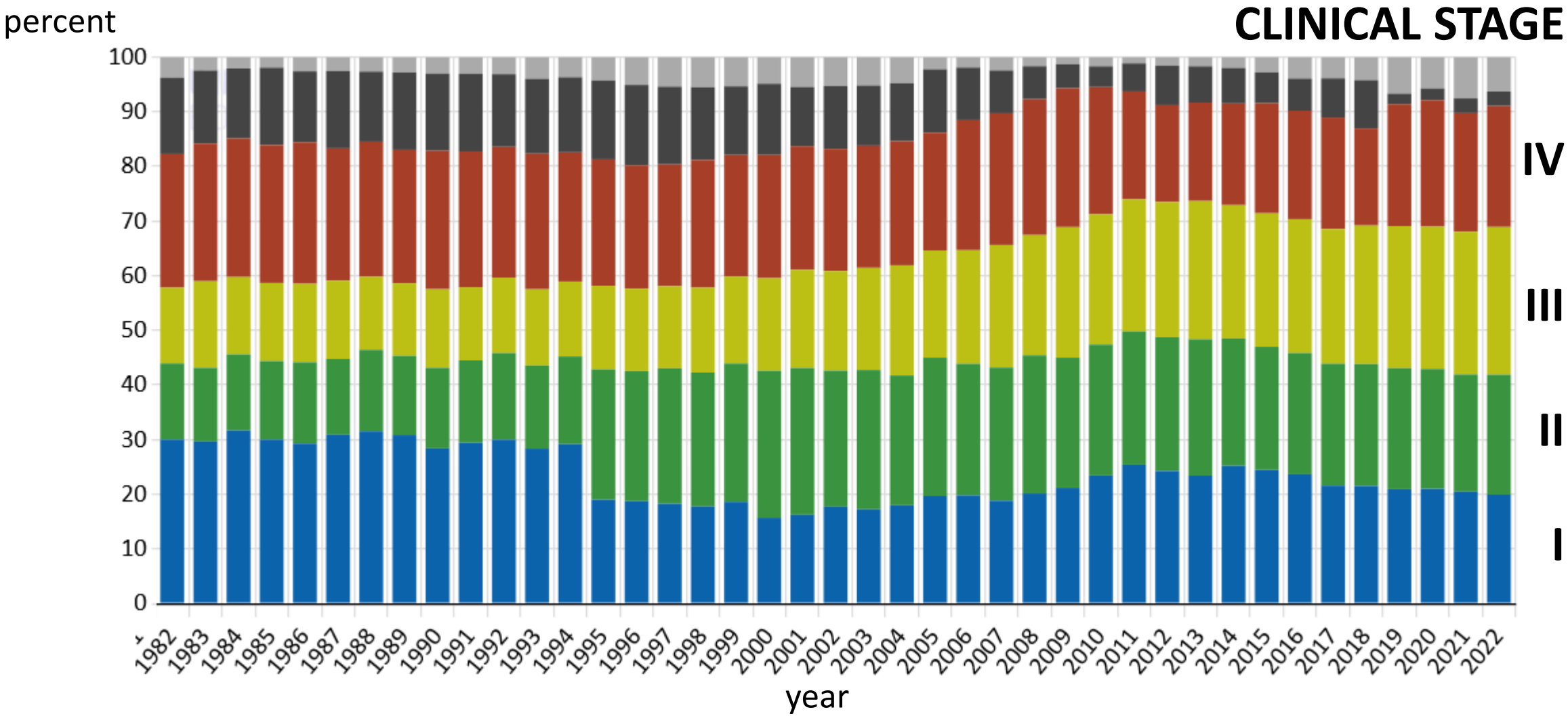
Incidence and mortality for colorectal cancer in the Czech Repulic

persons per 100.000 ASR(E) 2013



Institute of Health Information and Statistics of the Czech Republic.

Clinical stages of colorectal cancer in the Czech Repulic



Institute of Health Information and Statistics of the Czech Republic.

Screening as a Holy Grail?

JAMA Internal Medicine | Original Investigation

Estimated Lifetime Gained With Cancer Screening Tests
A Meta-Analysis of Randomized Clinical Trials

Michael Bretthauer, MD, PhD; Paulina Wieszczy, MSc, PhD; Magnus Løberg, MD, PhD; Michal F. Kaminski, MD, PhD; Tarjei Fiskergård Werner, MSc; Lise M. Helsingen, MD, PhD; Yuichi Mori, MD, PhD; Øyvind Holme, MD, PhD; Hans-Olov Adami, MD, PhD; Mette Kalager, MD, PhD

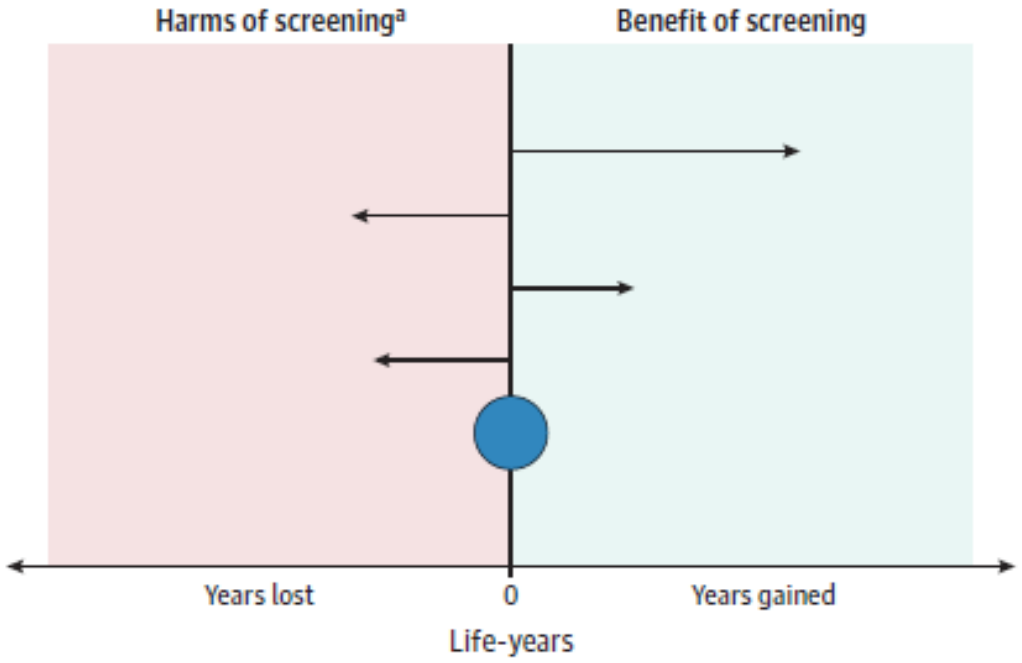
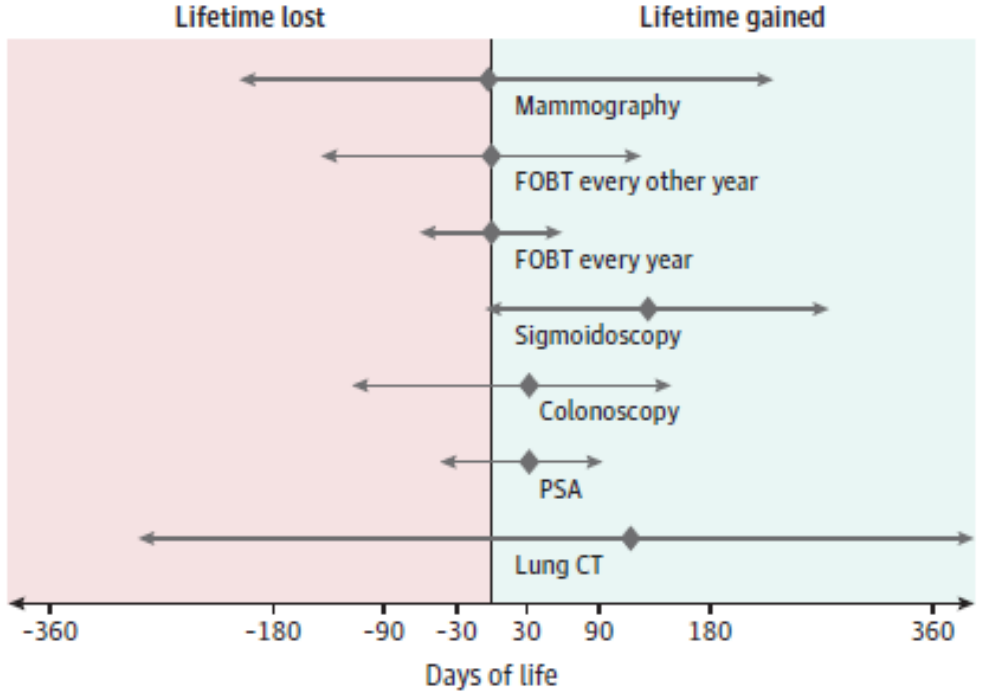


Figure 2. Lifetime Gained With Commonly Used Cancer Screening Tests

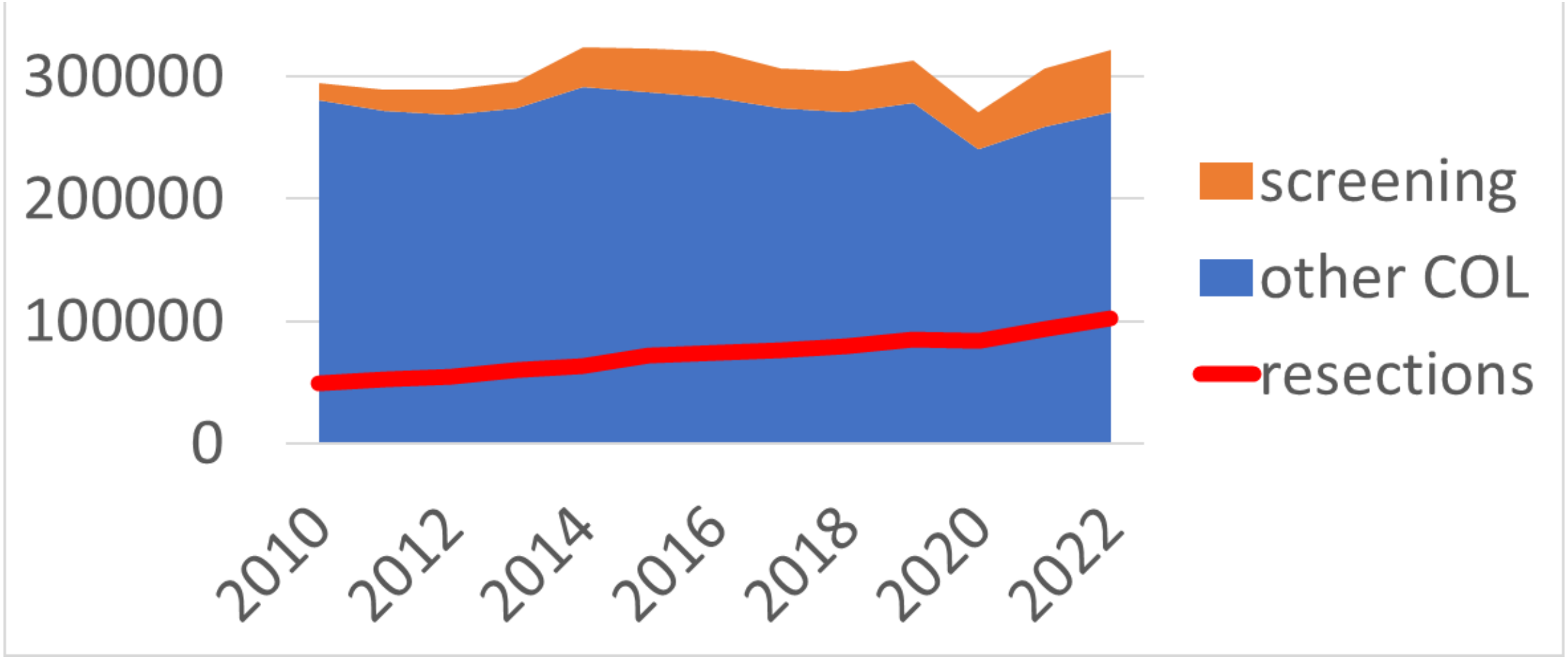


The diamonds indicate point estimates of life days gained or lost for each screening test. Left and right arrows indicate 95% CIs. CT indicates computed tomography; FOBT, fecal occult blood testing; and PSA, prostate-specific antigen.

Michael Bretthauer et al. JAMA Intern Med 2023;183:1196-1203.

Capacity „ceiling“ for screening

Lower endoscopies in the Czech Republic:



Institute of Health Information and Statistics of the Czech Republic.

Correct indication:

Appropriate indications for diagnostic colonoscopy
Evaluation of **unexplained GI bleeding** (**hematochezia**, melena, **FOBT**)
Unexplained iron deficiency **anaemia**
Screening for colorectal neoplasia at recommended intervals
Surveillance for CR neoplasia at recommended intervals
Assessment of **IBD activity**
Clinically significant unexplained **diarrhea**
Evaluation of **abnormal colorectal imaging**

Douglas DK. Gastrointest Endosc 2024;100:352-381.

Colonoscopy follow-up

Colorectal adenoma:

NEEDS FOLLOW-UP	adenoma
size	**≥ 10 mm**
number	**≥ 5**
dysplasia	high grade

3 YEARS

5 YEARS

10 YEARS

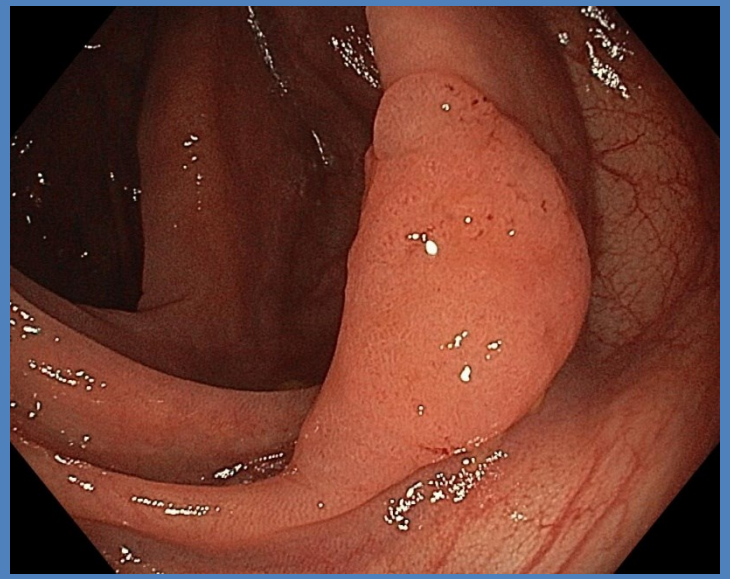
NO! iFOBT

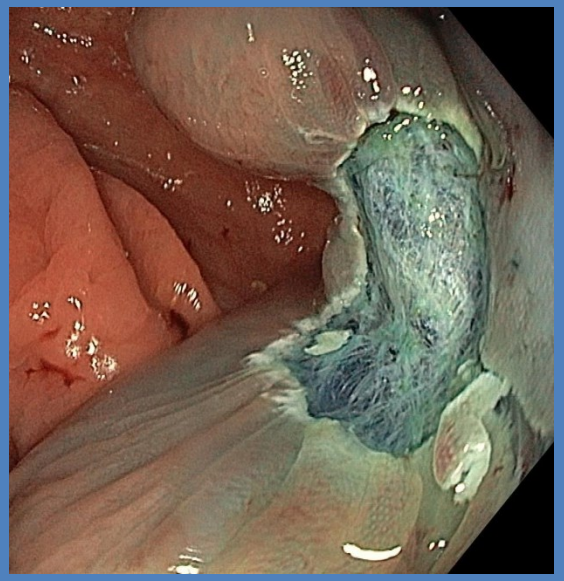
...while the benefit lasts: < 75-80 years of age, > 10 years of life expectancy

Hassan C. et al. Post-polypectomy colonoscopy surveillance: ESGE Guideline. Endoscopy 2020; 52:687-700.

„Favouritism“ to persons already „stuck in the system“:

60 years of age



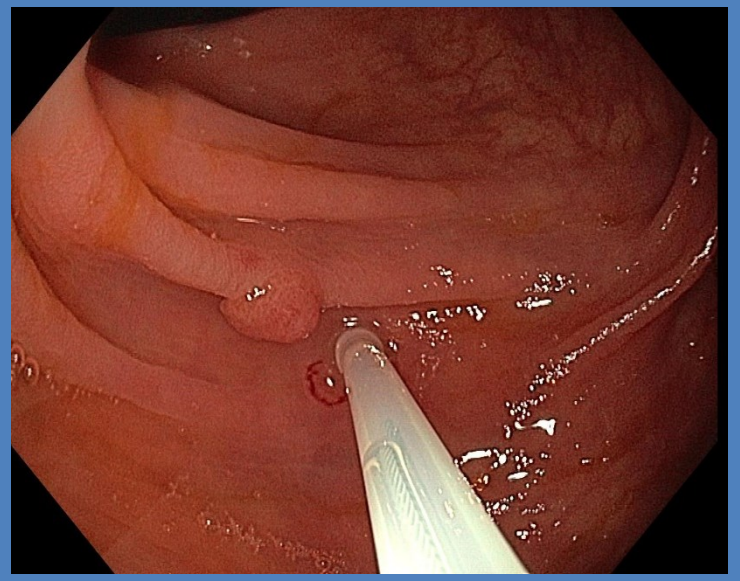


„Favouritism“ to persons already „stuck in the system“:

60 years of age

→ 3 years F-U

→ 5 years F-U



„Favouritism“ to persons already „stuck in the system“:

F-UP IN 68 + 10 = 78 years?

COMORBIDITIES? LIFE EXPECTANCY?

RISKS?

HAS THE SCREENING PROGRAMME FULFILLED ITS ROLE?

RESTRICTED ACCESS

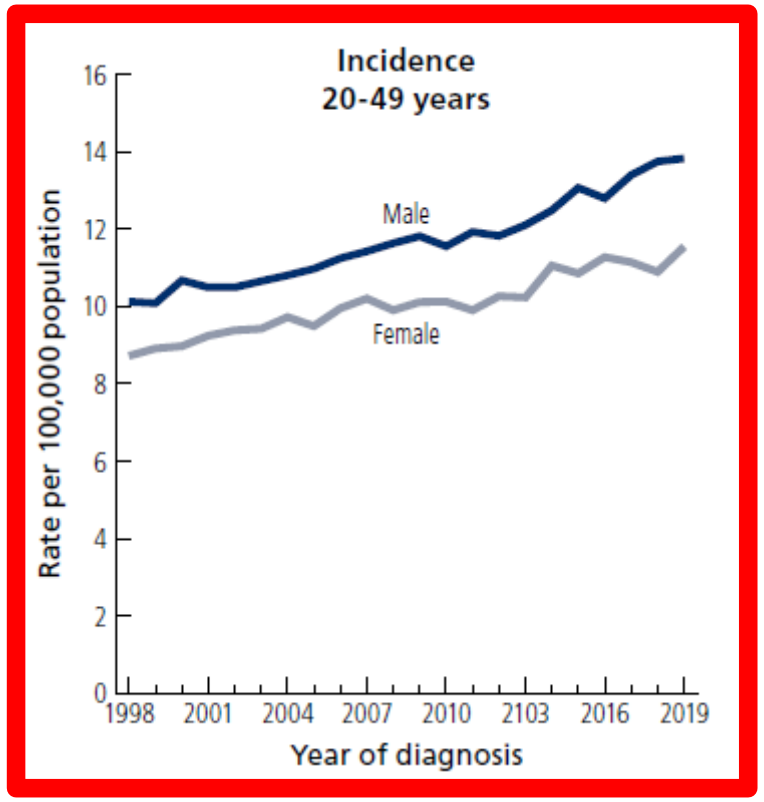
FIRST SCREENING COLONOSCOPY

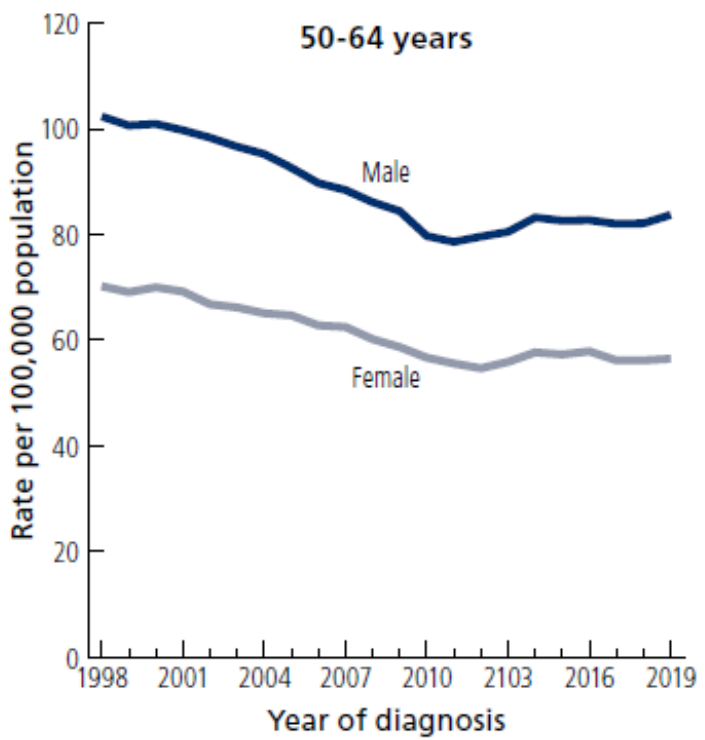
ASYMPTOMATIC PERSON OF 50 (45?) YEARS OF AGE

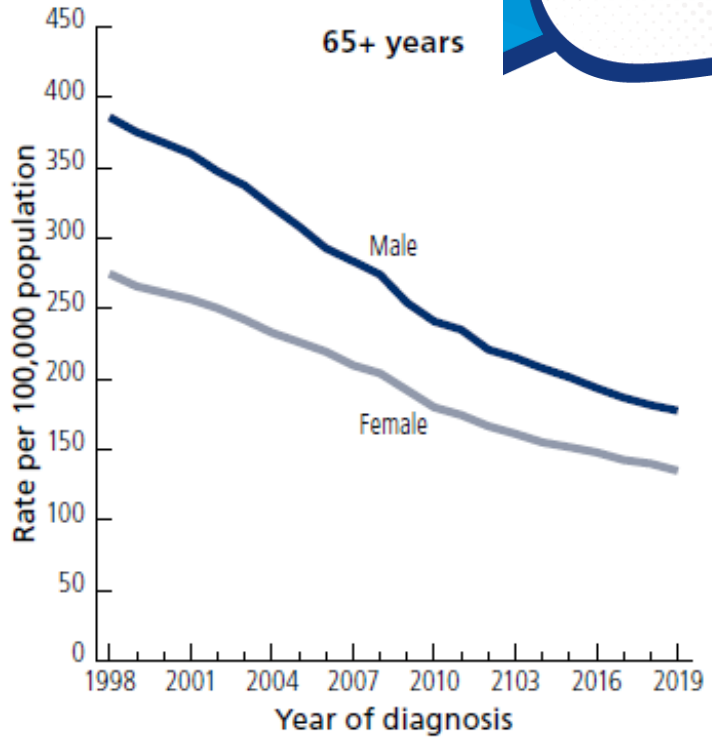
OPEN ACCESS

„45 is the new 50 for colonoscopies“

Trends in colorectal cancer incidence in US:

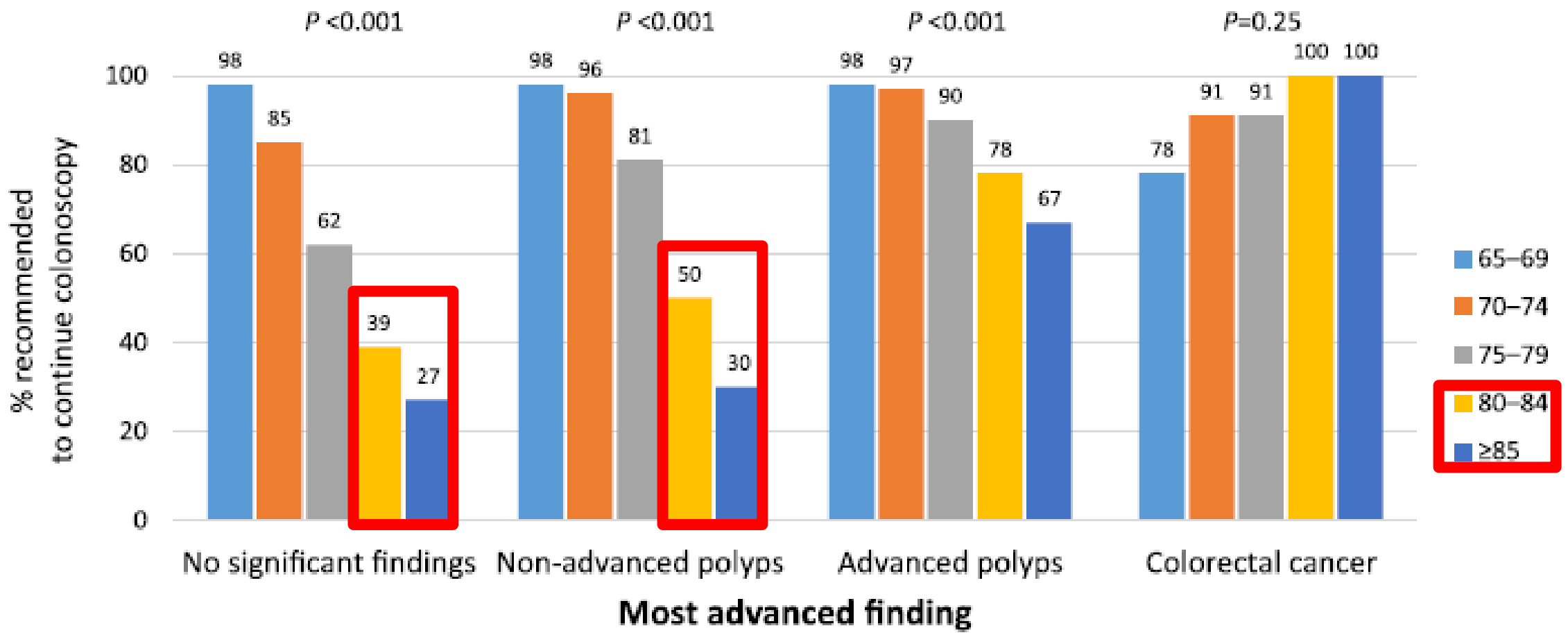






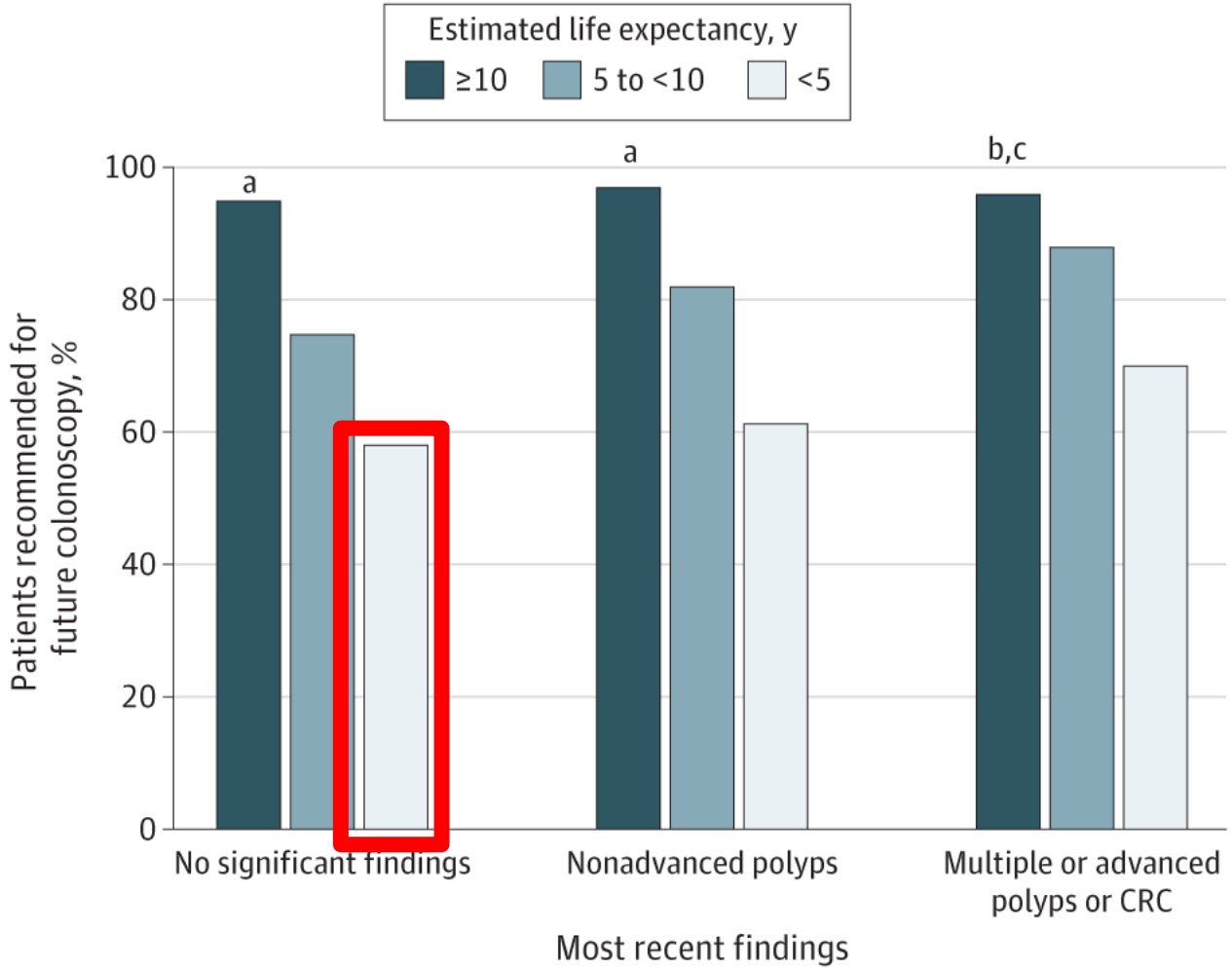
American Cancer Society. Colorectal Cancer Facts & Figures 2023-2025. Atlanta: American Cancer Society; 2023.

Colonoscopy and age



Calderwood AH. J Am Geriatr Soc 2022;70:801–811.

Colonoscopy and life expectancy



Calderwood AH. JAMA Intern Med 2023;183:426-434.

Conclusions 1/2:

- **reduction of the morbidity and mortality of colorectal cancer** is the only goal of the screening programme
- **the capacity** of colonoscopy screening **is limited**
- **the proper indication** for colonoscopy is key
- ...including **proper screening intervals**
- colonoscopy screening **can be harmful**
- **quality** is more than quantity

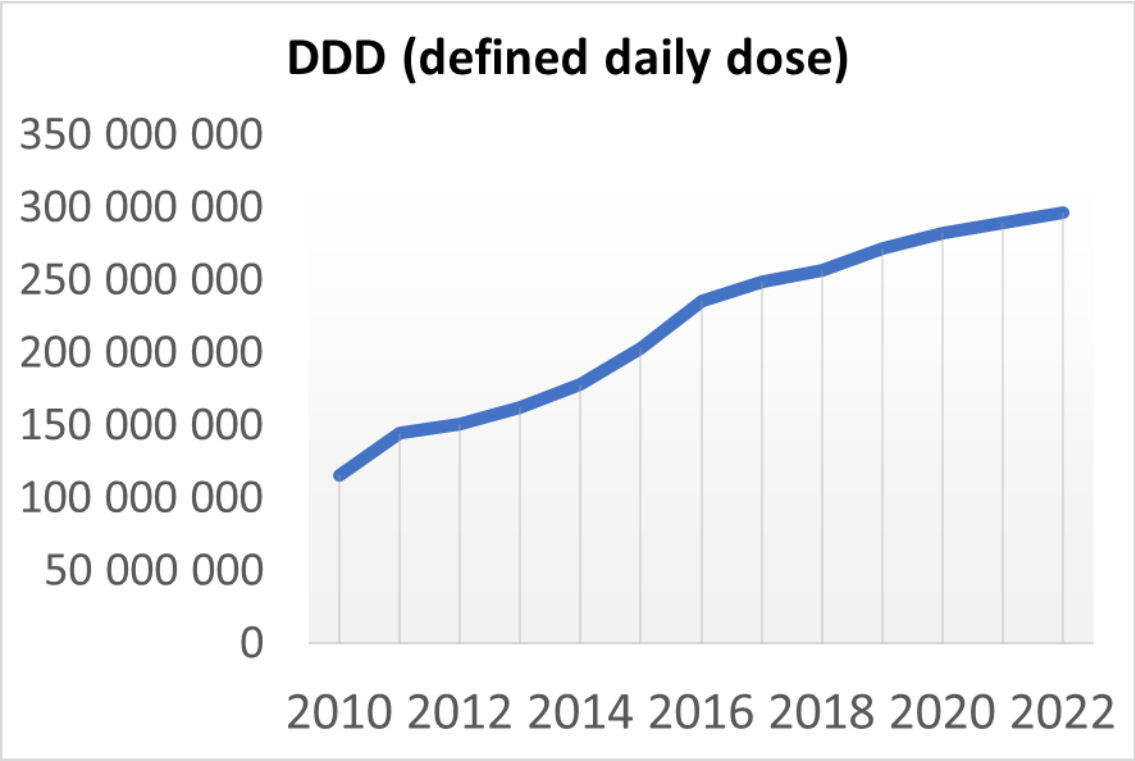
Agenda:

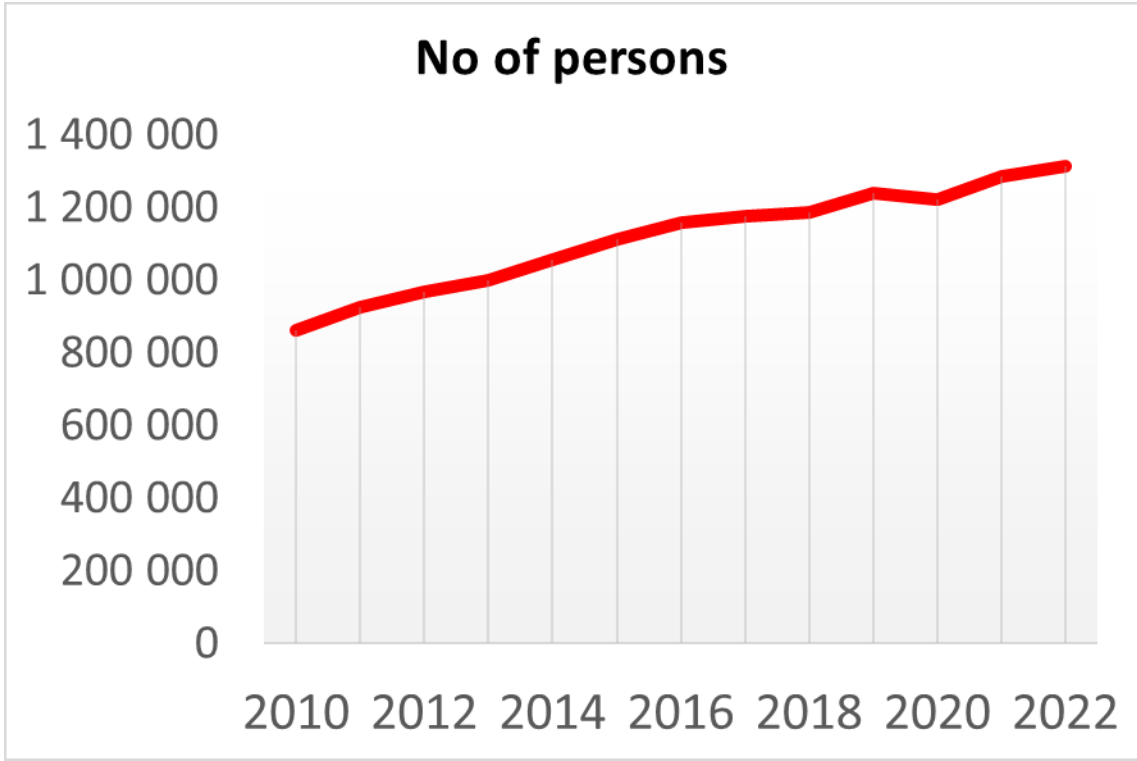
1. **Colorectal cancer screening programme** – limits?

2. **Proton pump inhibitors** overprescription and deprescribing

Proton pump inhibitors prescription in the Czech Republic

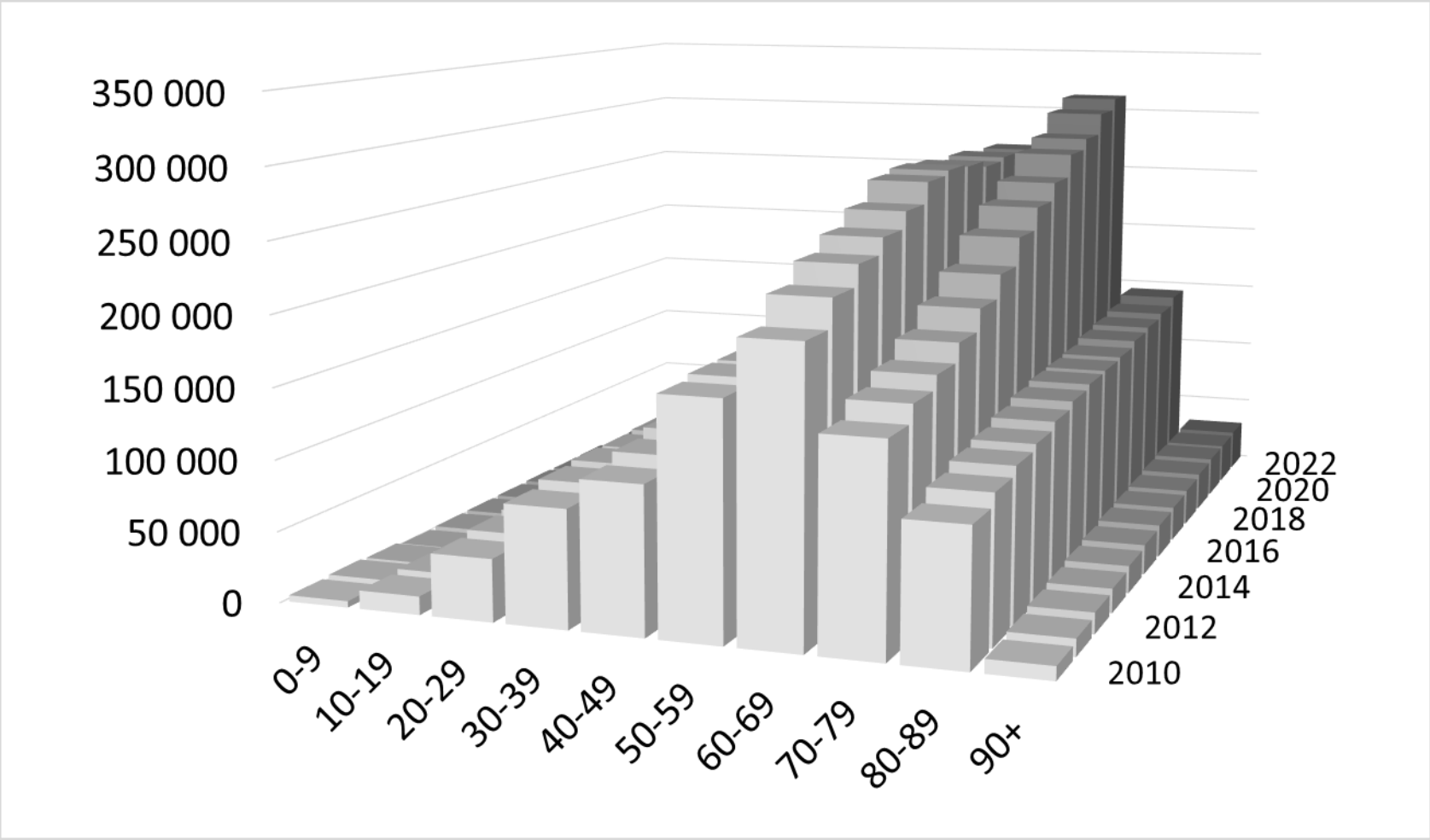
- **> 300 million DDD of antisecretory drugs yearly (99% PPIs)**
- **12% of the overall population treated by PPIs**





Cyrany J. PP0116. United Journal Gastroenterol J 2024;12:729.

Proton pump inhibitors and seniors in the Czech Republic



PPIs were prescribed to **29% of senior population** (≥65 years of age; 2022).

Cyrany J. PP0116. United Journal Gastroenterol J 2024;12:729.

PPI deprescribing at glance:

WHY IS PATIENT TAKING A PPI LONG TERM?

DEFINITELY INDICATED:
- *GERD COMPLICATIONS*
- *EoESOPHAGITIS*
- *BLEEDING PROPHYLAXIS*

RELATIVELY INDICATED:
- *UNCOMPLICATED GERD*
- *PPI RESPONSIVE Sx*

TEMPORARILY, IF INDICATED

CONTINUE

REDUCE

STOP

PPI deprescribing at glance:

WHY IS PATIENT TAKING A PPI LONG TERM?

DEFINITELY INDICATED:

- *GERD COMPLICATIONS:* *Barrett's esophagus, stenosis, ulcer*
- *EoESOPHAGITIS:* *when PPIs induce histological remission*
- *BLEEDING PROPHYLAXIS* *GASTROPROTECTION*

CONTINUE

Dhar A, et al. Gut 2022;71:1459–1487.

PPI deprescribing at glance:

WHY IS PATIENT T… M?

DEFINITELY INDICATED:

- *GERD COMPLICATIONS*
- *EoESOPHAGITIS*
- *BLEEDING PROPHYLAXIS*

CONTINUE

TUNA[2]	at least 2 factors
T	thienopyridines
U	ulcer history
N	NSAID
A	aspirin
A	anticoagulation
+ consider: age & comorbidities	

H.p. test& treat

Kurlander JE. Am J Gastroenterol 2020;115:689-96.

PPI deprescribing at glance:

WHY IS PATIENT TAKING A PPI LONG TERM?

DEFINITELY INDICATED:
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- *PPI RESPONSIVE Sx*

TEMPORARILY, IF INDICATED

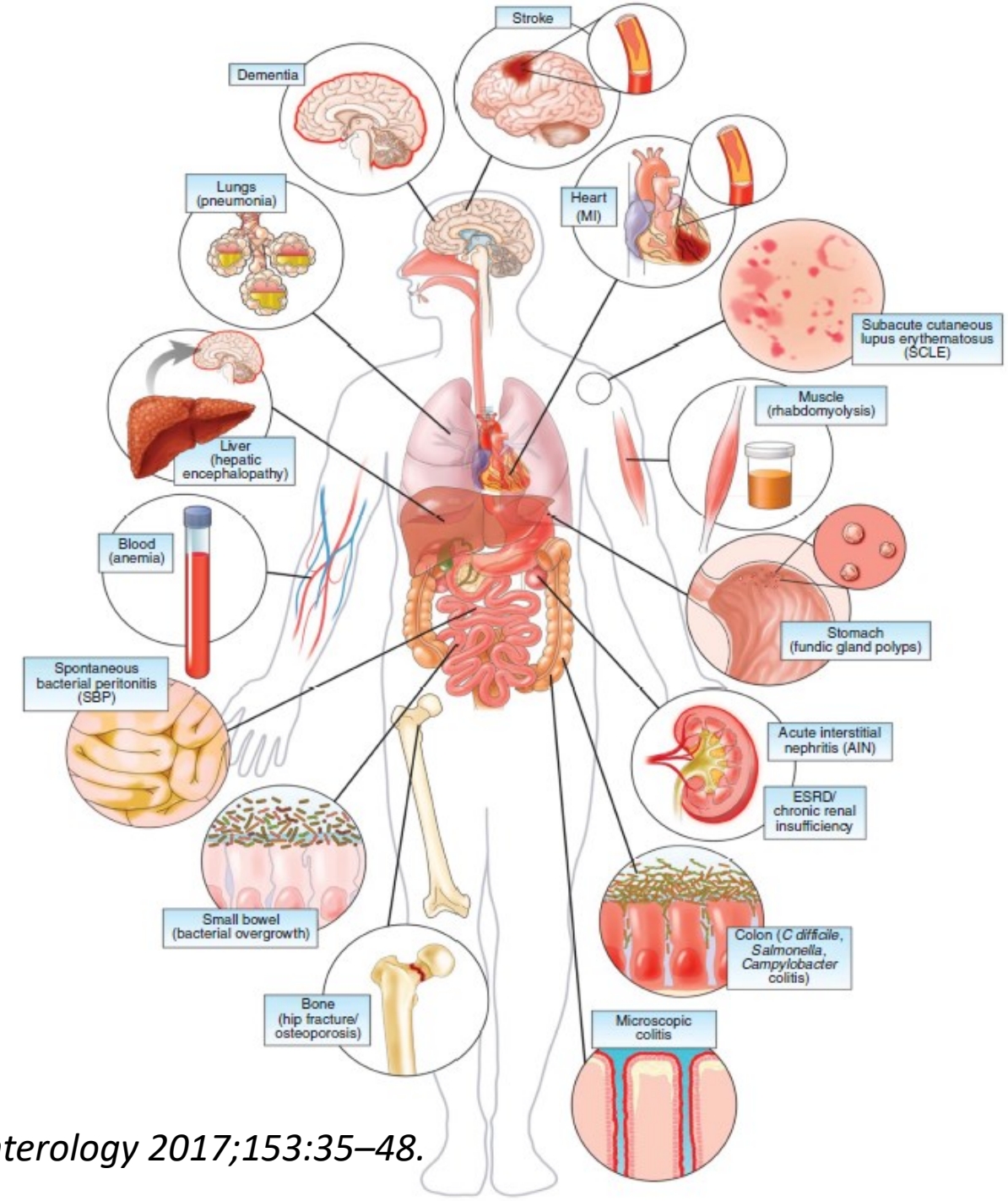
CONTINUE

REDUCE

STOP

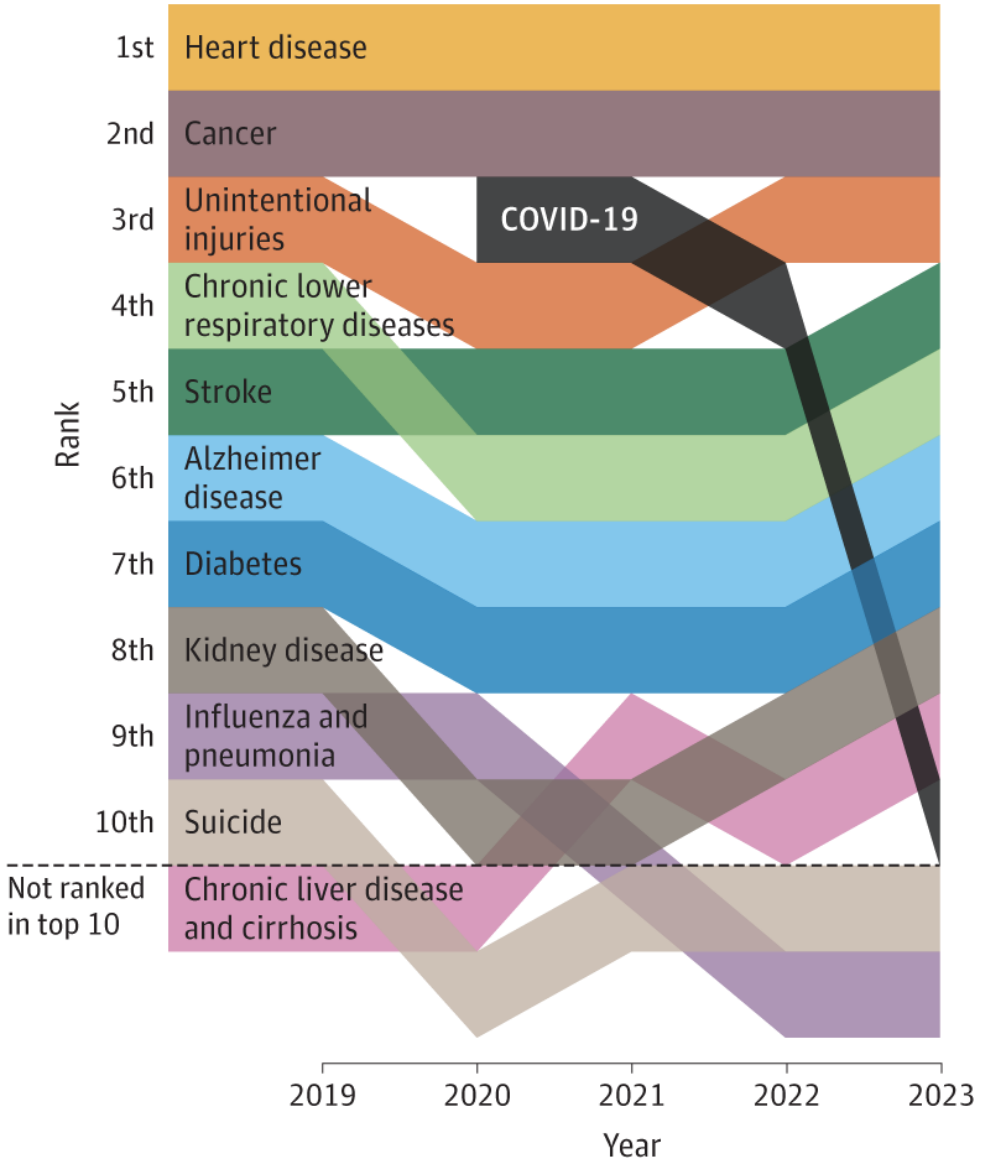
PPI complications?

Adverse event	Effect size (95% CI)
Enteral infection	OR 2.55 (1.53–4.26)
Community-acquired pneumonia	OR 1.49 (1.16–1.92)
Clostridium difficile-associated diarrhea	OR 1.26 (1.12–1.29)
Hip fracture	OR 1.26 (1.16–1.36)
Dementia	HR 1.44 (136–1.52)
Vitamin B12 deficiency	HR 1.83 (1.36–2.46)
Chronic renal failure	RR 1.36 (1.07–1.72)
Myocardial infarction	OR 1.16 (1.09–1.24)



Targovnik L. Am J Gastroenterol 2018;113:519–528.
Vaezi M. Complications of proton pump inhibitor therapy. Gastroenterology 2017;153:35–48.

Liver cirrhosis ranks among the top 10 causes of death:

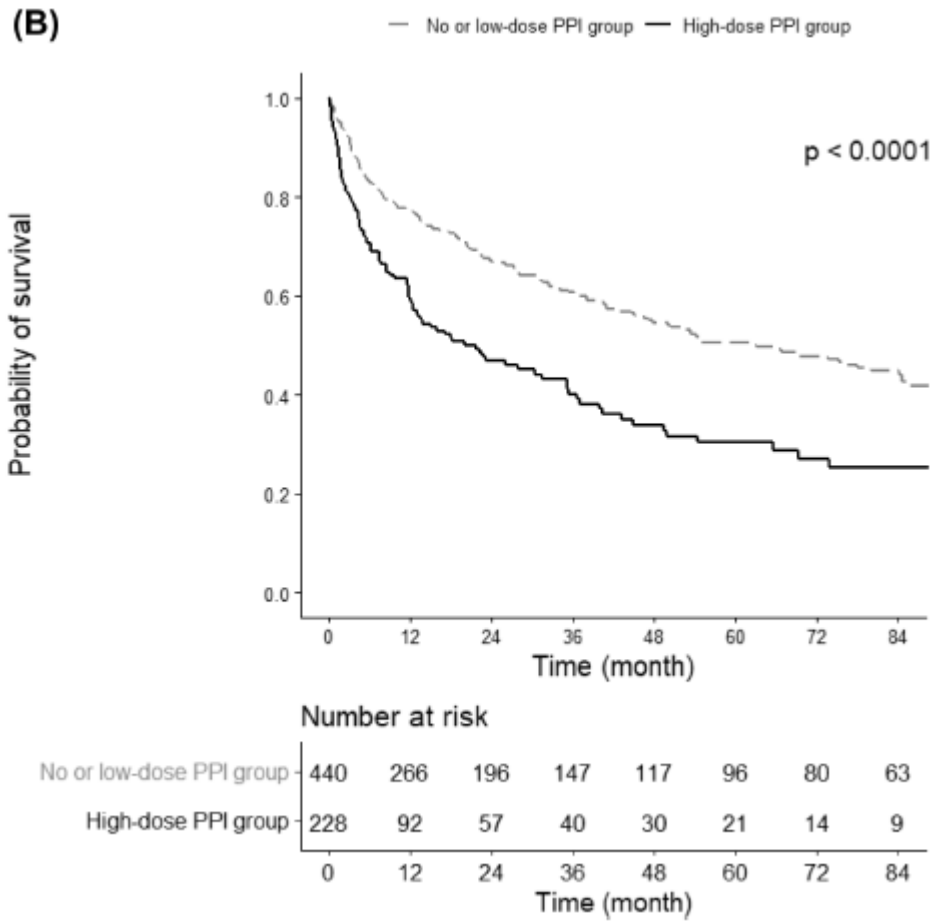


BAVENO VII:
6. Acute variceal bleeding

6.12 Proton pump inhibitors, when started before endoscopy, **should be stopped immediately** after the procedure unless there is a strict indication to continue them. (D.2)

Ahmad FB. JAMA 2024;332:957-958.
de Franchis R. J Hepatol. 2022 Apr;76(4):959-974.

PPIs and hepatic cirrhosis:



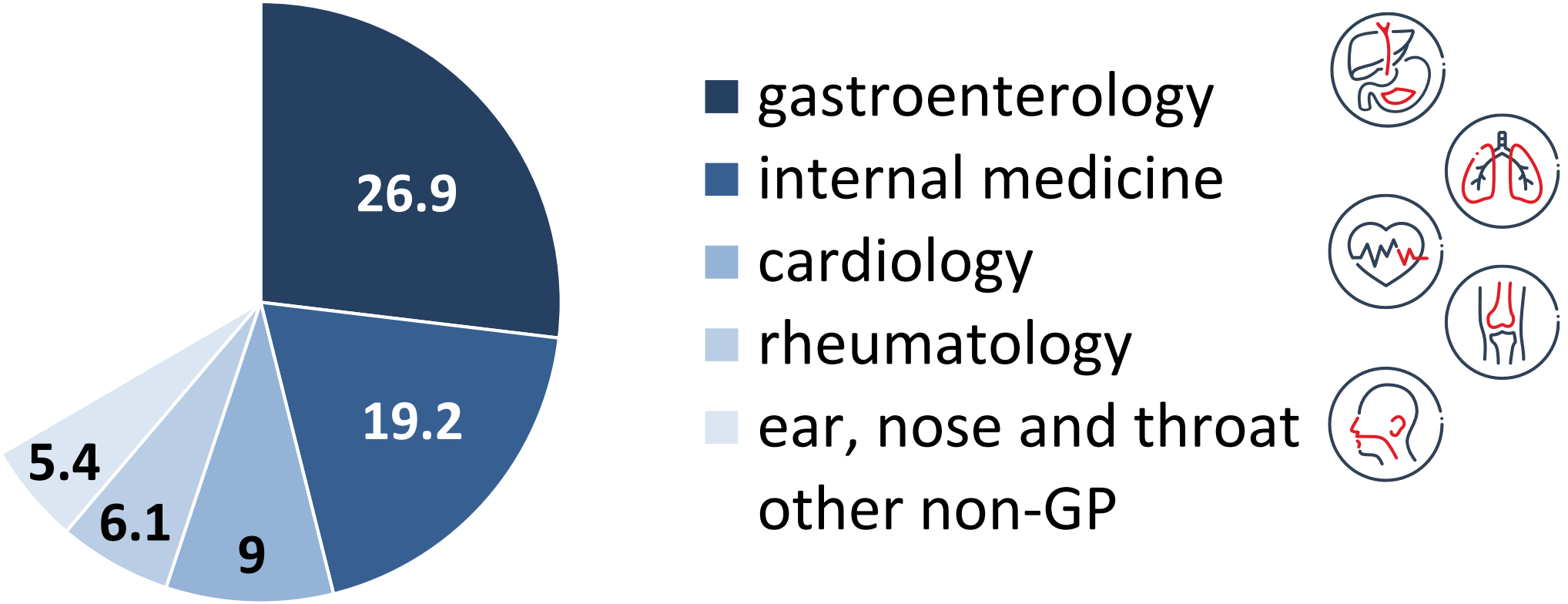
- retrospective cohort study
- patients with hepatic encephalopathy
- **high-dose PPI** (≥ 0.5 mDDD)

adjusted hazard ratio:

- **death** **1,71** (1.38–2,11), $p < 0.001$
- **rec. HE** **2,04** (1.66–2.51), $p < 0.001$
- **SBP** **1,87** (1.43–2.43), $p < 0.001$
- **HRS** **1,48** (1.02–2.15), $p = 0.04$
- **GIB** **1,46** (1.12–1.90), $p = 0.006$

Yoon JS. Aliment Pharmacol Ther. 2024;59:973–983.

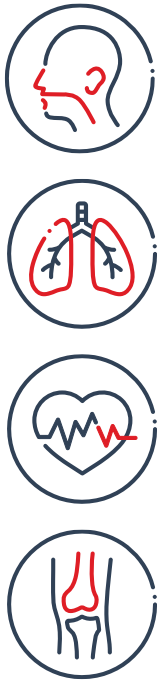
Prescrition of PPIs by specialists



Percentage proportion of **non-GP** (general practitioner) **specialist** prescription of proton pump inhibitors in 2022 in the Czech Republic.

Cyrany J. PP0116. United Journal Gastroenterol J 2024;12:729.

„JUMPERS OF THE DECADE“



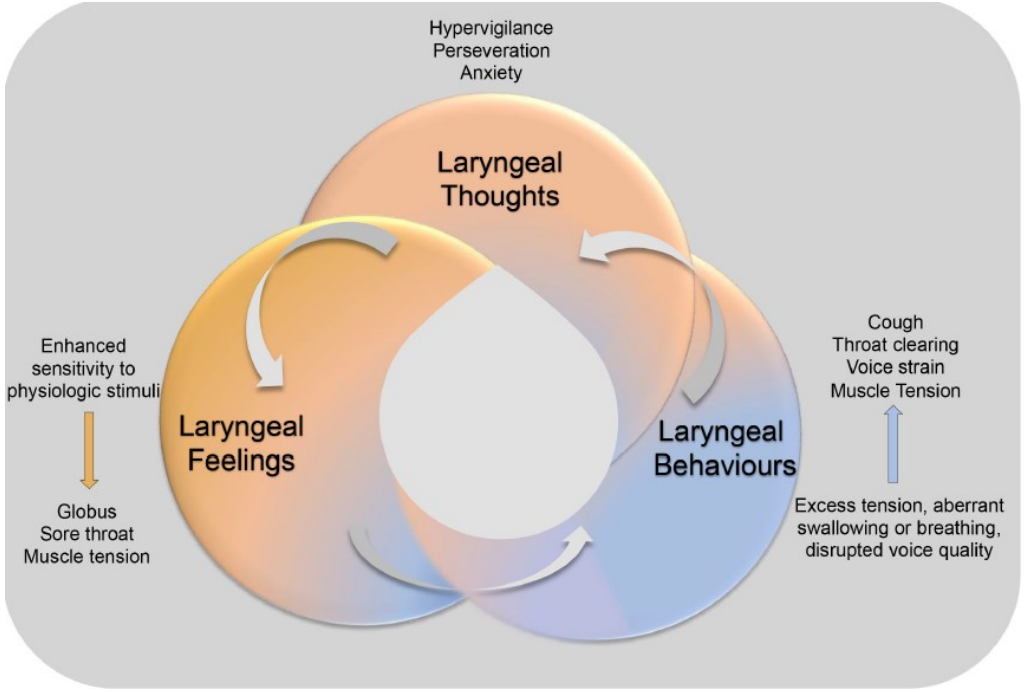
ear, nose and throat	18.7 times
allergo/immunology	5.7 times
pneumology	4.4 times
cardiology	4 times
rheumatology	3.1 times
AVERAGE	2.6 times

Increase in prescription of proton pump inhibitors in DDD (defined daily doses) by prescribing specialist in the period of 2010 - 2022.

Cyrany J. PP0116. United Journal Gastroenterol J 2024;12:729.

„Laryngo-pharyngeal reflux“

- the retrograde flow of gastric contents proximal to the upper sphincter leading to laryngeal symptoms
- the lack of a diagnostic gold-standard
- disorders of larynx-brain interaction



Krause AJ, Ydlapati R. Aliment Pharmacol Ther. 2024;00:1-16.

PPIs and pulmonary fibrosis

AMERICAN THORACIC SOCIETY DOCUMENTS

Idiopathic Pulmonary Fibrosis (an Update) and Progressive Pulmonary Fibrosis in Adults
An Official ATS/ERS/JRS/ALAT Clinical Practice Guideline

Evidence-based Recommendations for Treatment of IPF

[redacted]

(conditional recommendation, very low quality evidence). Remarks: Antacid medication and other interventions may be appropriate for patients with both IPF and symptoms of gastroesophageal reflux disease (GERD) for the purpose of improving gastroesophageal reflux (GER)–related outcomes in accordance with GER-specific guidelines.

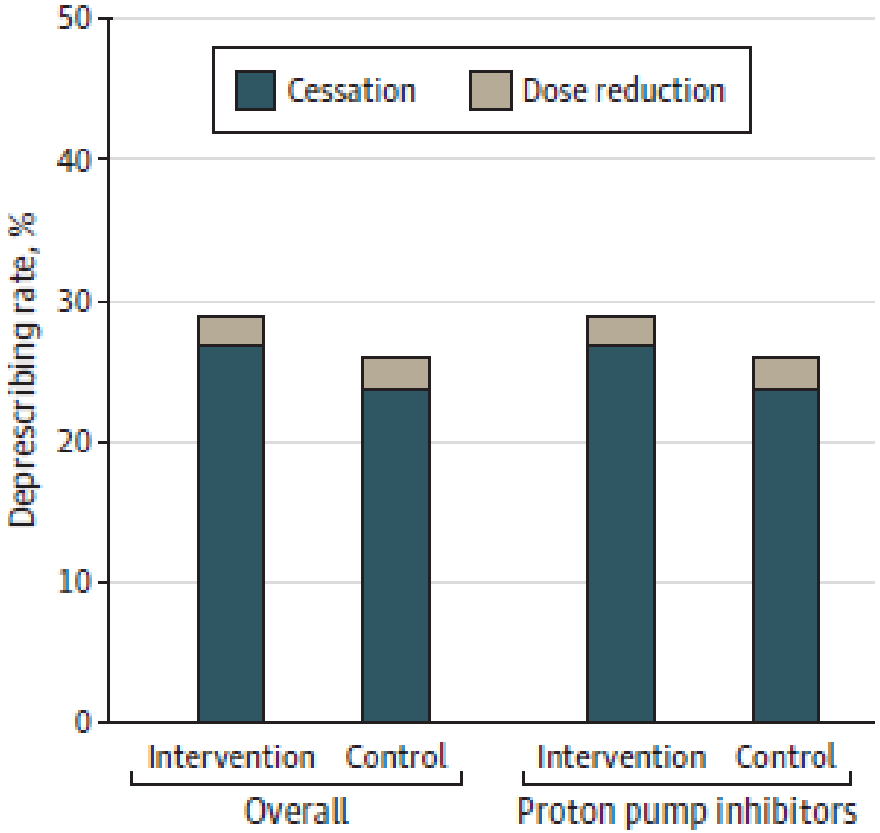
Raghu G. Am J Respir Crit Care Med 2022;205:e18–e47.

Decision made together with educated patient:

JAMA Internal Medicine | Original Investigation | LESS IS MORE

Patient-Directed Education to Promote Deprescribing
A Nonrandomized Clinical Trial

Katie Fitzgerald Jones, PhD, ACHPN; Kelly Stolzmann, MS; Jolie Wormwood, PhD; Jacquelyn Pendergast, MS; Christopher J. Miller, PhD; Michael Still, MS; Barbara G. Bokhour, PhD; Joseph Hanlon, PharmD, MS; Steven R. Simon, MD, MPH; Amy K. Rosen, PhD; Amy M. Linsky, MD, MSc



Jones KF. JAMA Intern Med. Published online September 23, 2024.

Do I st
mec

You are
proton p

- ○ Dexlansoprazol
- ○ Esomeprazole
- ○ Omeprazole

VA HEALTH CARE Defining EXCELLENCE in the 21st Century

QUIZ

Proton pump inhi

1. PPIs are sometimes pres heartburn and acid reflux
2. More than half of all peop probably do not need the
3. There are no risks involv for a long time.
4. PPIs are the best option occasional heartburn.

1. TRUE

Proton pump inhibitors (PPIs) are s and acid reflux. PPIs reduce the pro stomach produces acid to help brea can reflux back up the throat and ca

2. TRUE

To treat occasional heartburn, it is re as Tums® or Rolaids®, as needed. S take a PPI, your physician should pr shortest amount of time possible. Th should be continued or stopped.

3. FALSE

Taking a PPI for longer than 4 to 12

- A higher risk of hip fractures
- Pneumonia
- An infection with the bacteria *Clo* severe diarrhea, fever, and in rar
- A higher risk of kidney problems
- Rare instances of vitamin B12 or

4. FALSE

PPIs are powerful drugs. If you have probably do not need a PPI. Over-th You can ease heartburn without drug

Live Whole Health.

2 QUESTIONS TO ASK YOURSELF

1. How does staying on my medication help me reach my personal health goals? _____

_____

2. How does stopping my medication help me reach my personal health goals? _____

_____

5 QUESTIONS TO ASK YOUR HEALTH CARE PROVIDER

1. Do I need to continue my medication?
2. How do I reduce my dose?
3. Is there an alternative treatment?
4. What symptoms should I look for when I stop my medication?
5. With whom do I follow up and when?

Questions I want to ask my health care provider about my medication

Use this space to write down questions you may want to ask:

Conclusions 2/2:

- **PPIs are overprescribed especially in seniors**
- **definite indications for long-term PPI treatment are limited**
- PPIs **deprescribing is feasible**
- PPIs are **not a causal therapy for GERD** either
- LPR has no diagnostic gold standard so far
- PPIs **can be harmfull**
- **a properly educated patient** is the best buddy

Co-authorship:

Choosing Wisely Czech group

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- Michal Vysoudil, Prague and Brno
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