Conflict of interest statement

I herewith declare anything that may potentially be viewed as a conflict of interest during the past three years such as paid or unpaid consultancies, business interests or sources of honoraria payments:

Nothing to declare

WEO

The voice of world endoscopy

Proximal serrated polyp detection rate and risk of interval post-colonoscopy colorectal cancer

D.E.F.W.M. van Toledo, M.D.[1*], J.E.G. IJspeert, M.D. [1*], P.M.M. Bossuyt, Ph.D.[2], A.G.C. Bleijenberg, M.D. [1], M.E. van Leerdam, M.D.[3,4], M. Van der Vlugt, M.D. [1], I. Lansdorp-Vogelaar, Ph.D.[5], M.C.W. Spaander, M.D.[6] , E. Dekker, M.D.[1]

Amsterdam UMC

University Medical Centers

Background

- Adenoma detection rate (ADR) is inversely associated with interval post-colonoscopy colorectal cancer (interval PCCRC)

" all cancers detected after negative colonoscopy for CRC and before advised surveillance interval"

- Interval PCCRCs develop frequently from serrated polyps

- Proximal serrated polyp detection rate (PSPDR) as new quality indicator?

- PSPDR leaves out histopathological differentiation of serrated polyps

NEJM, Kaminski, 2010
Gastro, Rutter, 2018
Am J Gastroen, Arain, 2010

Aim

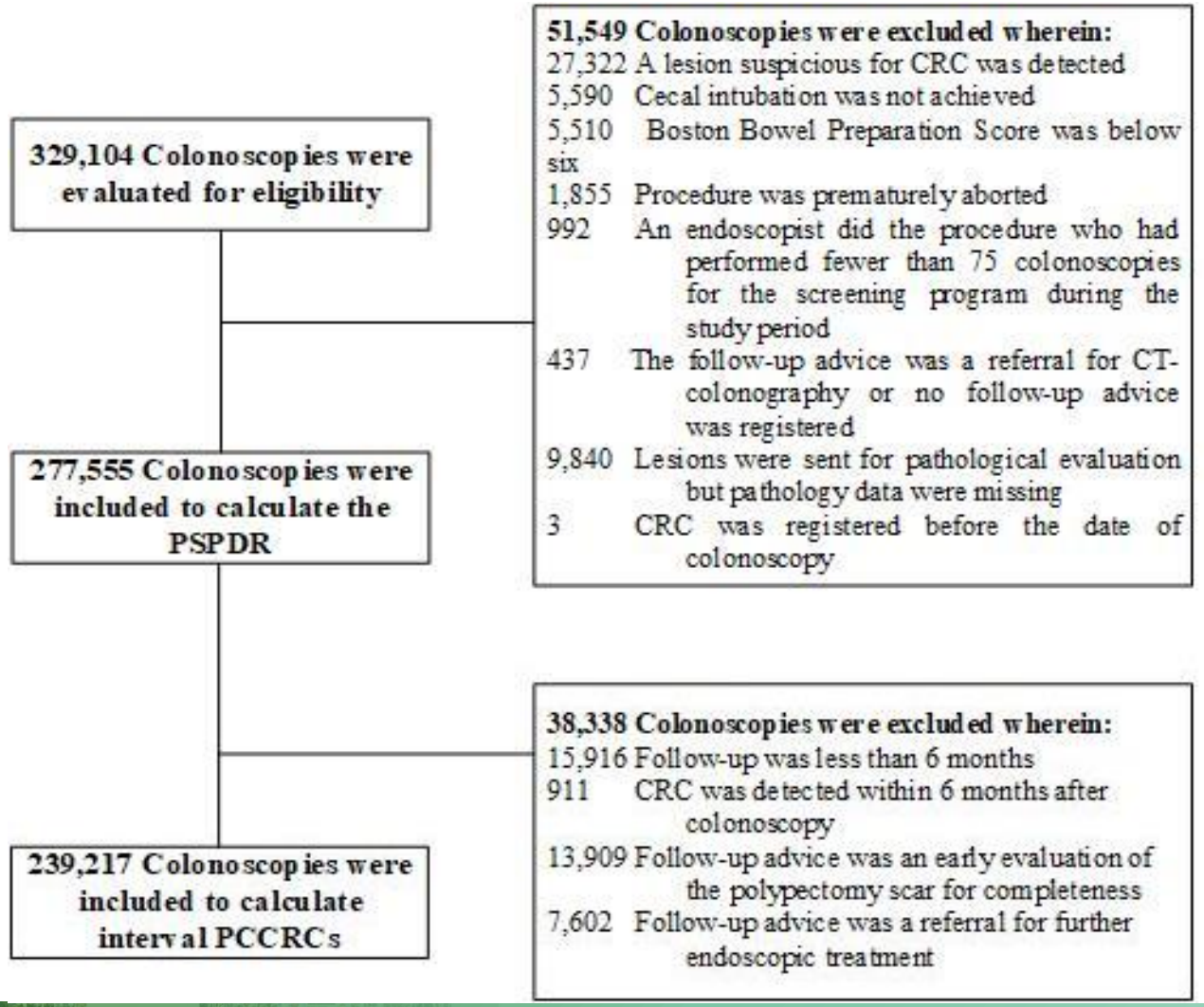
- To evaluate the association between endoscopists' PSPDR and their patients risk for interval PCCRC

Method

- National FIT-based screening program
- January 2014 - December 2020
- Colonoscopy screening database + National Cancer Registry

- Multilevel proportional-hazard regression analysis

Method: flowchart



Results: Baseline characteristics

	Colonoscopies (n=277,555)		Interval PCCRC (n=305)
Age, years	68	(63-72)	70 (66-74)
Sex			
Female	115,240	(42%)	130 (43%)
Male	162315	(58%)	175 (57%)
Endoscopists, (n=441)			-
Median PSPDR, %	11.9	(8.3 -15.8)	-
Median ADR, %	66.3	(61.4-69-9)	-

Results: linear association PSPDR and interval PCCRC

- PSPDR 1%↑ = 7%↓ interval PCCRC risk

- Association also in subgroups:
  - females/males
  - proximal/distal interval PCCRC
  - advanced/non-advanced interval PCCRC

Results: proximal /distal interval PCCRC

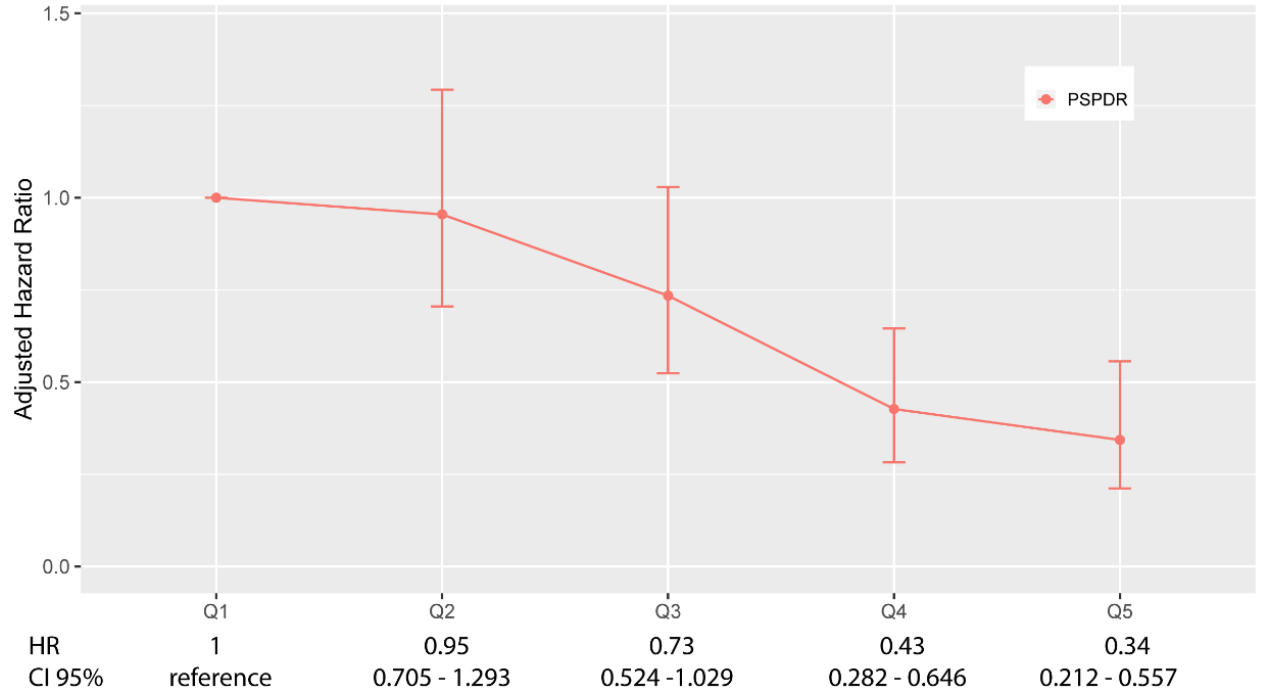
Proximal	HR (95% CI)*		p-value
PSPDR	0·94	(0·91 - 0·98)	0·001
Age	1·05	(1·02 - 1·08)	<0·001
Sex, female	1·54	(1·11 - 2·12)	0·009

Distal			
PSPDR	0·91	(0·87 - 0·94)	<0·001
Age	1·06	(1·02 - 1·09)	<0·001
Sex, female	0·67	(0·47 - 0.95)	0·02

- Proximal cancers → females have higher risk

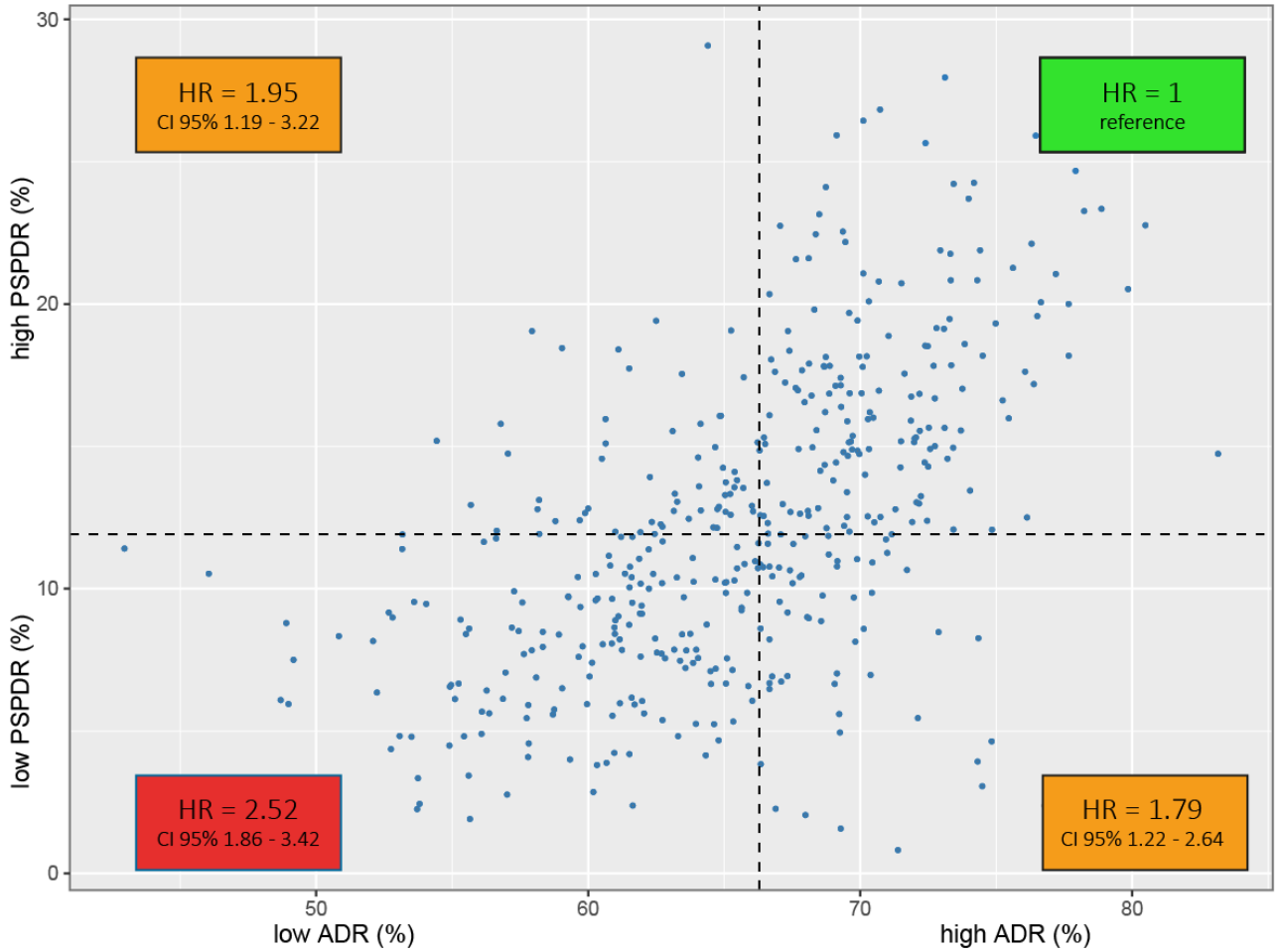
Results: association between PSPDR quintiles and interval PCCRC

- PSPDR in highest quintile → 66% lower interval PCCRC risk



1
1

Results: PSPDR and ADR together?



1
2

Conclusion

- Higher proximal serrated polyp detection rate (PSPDR) is associated with lower interval PCCRC risk
- PSPDR and ADR are only moderately correlated
- Endoscopists with a high PSPDR *and* high ADR have the lowest risk of interval PCCRC in their patients

→ We validated the PSPDR as new colonoscopy quality indicator in a FIT-based screening program

Implications

- Validation in different settings beyond FIT screening
- Training of endoscopists on awareness and diagnosis of serrated polyps
- Accurate classification of serrated polyps in endoscopy reports is essential to enable PSPDR registration

WEO
World Endoscopy Organization

For full paper: The Lancet Gastroenterology & Hepatology (online publication May 9th 2022)

Contact: d.e.vantoledo@amsterdamumc.nl