

Familial Risk in those with a First Degree Relative with an Advanced Adenoma

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Advanced Adenoma

- Tubular adenoma $\geq 10\text{mm}$
- Adenoma with villous histology
- Adenoma with high grade dysplasia



Risk to an individual who has a First Degree Relative (FDR) with:

- Colorectal Cancer (CRC)
- Any Adenoma
- Advanced Adenoma (AA)



Risk of CRC if FDR has CRC

Meta-Analysis	# studies	Relative Risk (95% CI)
<i>Johns 2001</i>	7	2.25 (2-2.53)
<i>Baglietto 2006</i>	7	2.81 (2.05-3.85)
<i>Butterworth 2006</i>	47	2.24 (2.06-2.43)

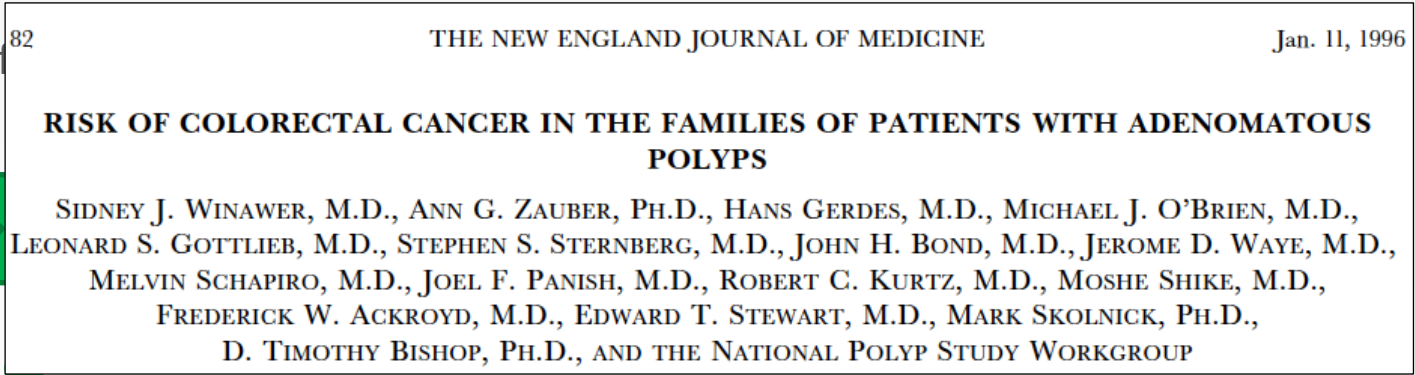
>2 fold higher risk



RISK OF SCREENING DRUGS IN ADENOMA

Early screening if FDR has CRC

Early screening if



1996
NPS

American College of Gastroenterology

Risk of CRC in parents/siblings of those with *any* adenoma: RR 1.78 (95% CI 1.18-2.67)

American Gastroenterological Association
American Society for Gastrointestinal Endoscopy

American Cancer Society

Risk of CRC in siblings of those with *any* adenoma <60 years: RR 2.59 (95%CI 1.46-4.58)

American Society of Colon and Rectal Surgeons
Crohn's and Colitis Foundation of America

Oncology Nursing Society

Society of American Gastrointestinal Endoscopic Surgeons



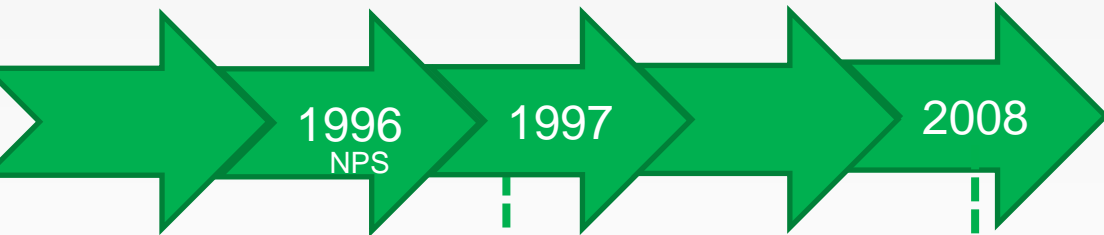
CRC Screening in the United States

Early screening if FDR has CRC



Early screening if FDR has adenoma

Early screening if FDR has *advanced adenoma*



1996
NPS

1997

2008

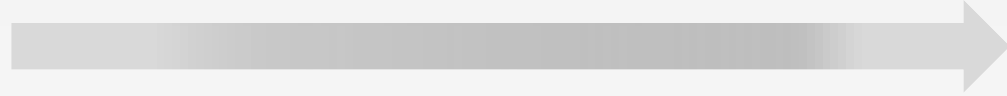
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- American College of Gastroenterology



CRC Screening in the United States

Early screening if FDR has CRC



Early screening if FDR has adenoma

Early screening if FDR has *advanced adenoma*



1996
NPS

1997

2008

2017

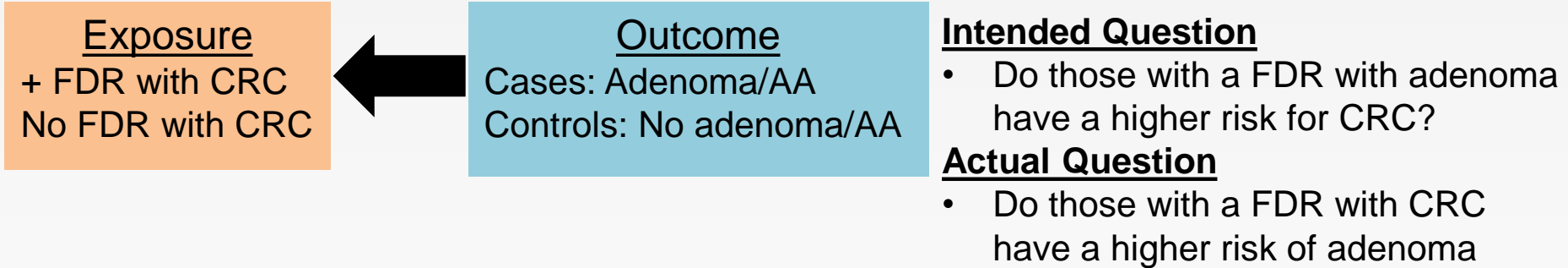
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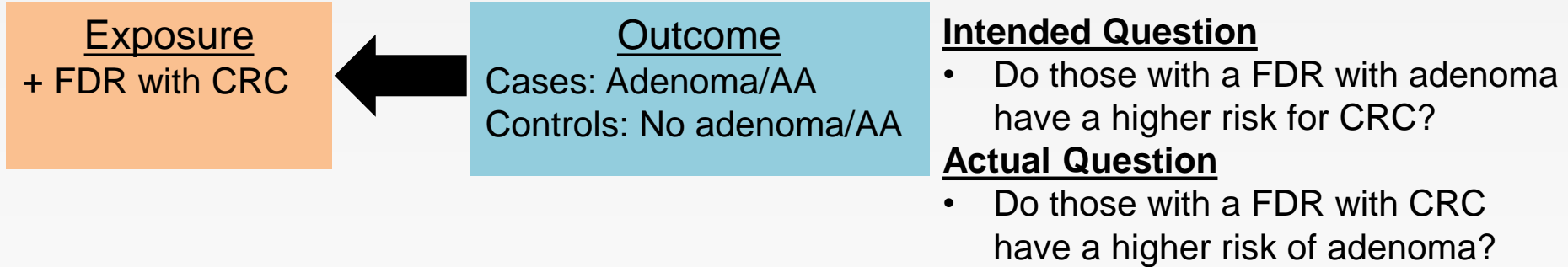
- National Comprehensive Cancer Network
- US Multi Society Task Force
- American College of Gastroenterology
- American Gastroenterological Association
- American Society for Gastrointestinal Endoscopy



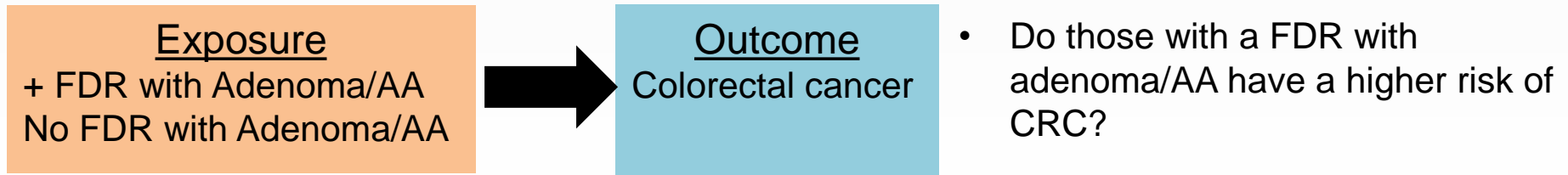
Case-Control Studies



Case-Control Studies



Cohort or Cross-Sectional Studies



Risk of colorectal neoplasia in those with a FDR with a large adenoma

	Relatives (n=168)	Controls (n=307)	Adjusted* OR (95%CI)
Cancers or large adenomas	8.4%	4.2%	2.27 (1.01-5.09)
Cancers	3%	1%	3.9 (0.89-17.01)

*Adjusted for age, sex, and geographical area of relatives and controls



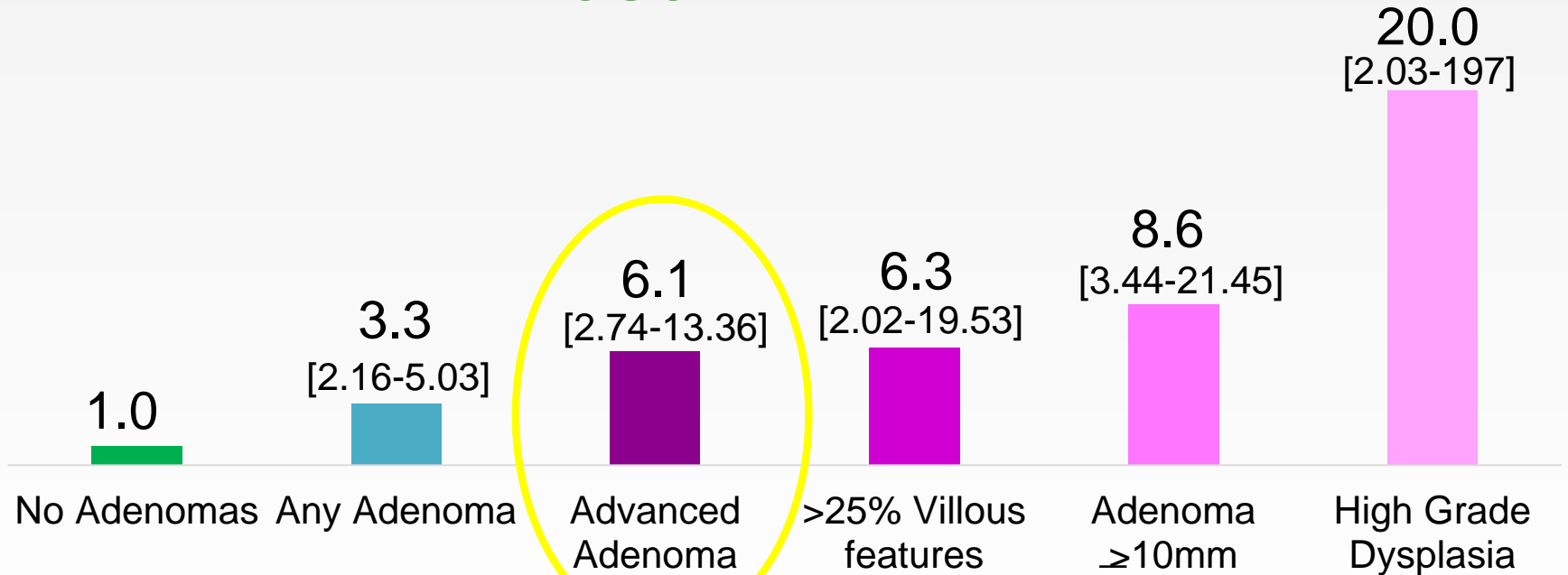
Risk of colorectal neoplasia in those with a FDR with a villous adenoma

	Relatives	Controls	RR (95%CI)
Colorectal Cancer	0.64%	0.41%	1.68 (1.29-2.18)
Advanced Adenoma	8.17%	5.18%	1.65 (1.28-2.14)



Risk of colorectal neoplasia in siblings of those with AA

*Matched Odds Ratio



*Adjusted for age and sex of proband



Guidelines



United States Multi-Society Task Force (US MSTF)

Advanced adenoma in 2 FDRs (any age) or in 1 FDR <60 years

Start at age 40 or 10 years before the age at diagnosis*
• Colonoscopy every 5y

AA in 1 FDR \geq 60 years

Start at age 40
• Any test

National Comprehensive Cancer Network (NCCN)

AA in 1 FDR (any age)

Start at age 40 or at age of onset of adenoma in relative*
• Colonoscopy every 5-10y

*whichever is earlier



What about Advanced Serrated Polyps?

- Sessile Serrated Polyp (SSP) ≥ 10 mm
- Sessile Serrated Polyp with Dysplasia
- Traditional Serrated Adenoma



Advanced Serrated Polyps: Large SSP

- Increased risk of synchronous advanced neoplasia
OR 3.24 (95%CI 2.05-5.13)
- Increased risk of CRC 3.34 (95% CI 2.16-5.03)
- Need data on risk to FDR



US Multi Society Task Force

“Screening for first-degree relatives of persons with advanced serrated lesions should be similar to the screening of FDRs with advanced conventional adenomas”

conditional recommendation, low quality evidence



Summary

- Risk in those with a FDR with CRC is >2 fold higher
- Risk in those with a FDR with AA is increased, but the exact magnitude of risk is not well defined
- Risk AA \neq Risk Advanced Serrated Polyp

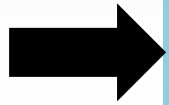


Challenges

- People don't know family history of polyps
- Takes time! And resources!
- What magnitude of risk would warrant special screening?

Exposure

+ FDR with Adenoma/AA
No FDR with Adenoma/AA



Outcome

Colorectal cancer

- Do those with a FDR with adenoma/AA have a higher risk of CRC?



Acknowledgements

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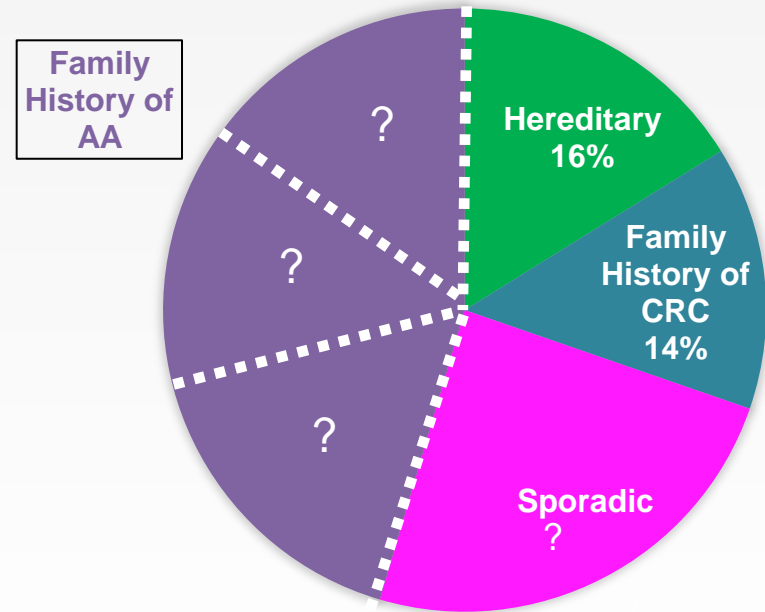
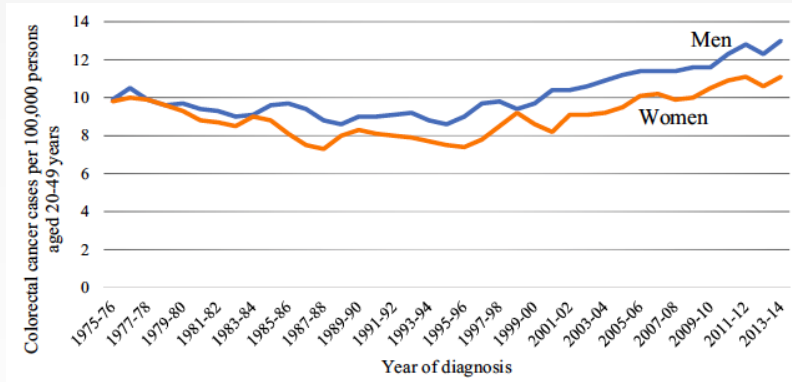


University of Colorado
Anschutz Medical Campus





Early Onset Colorectal Cancer



Incidence of CRC by family history of CRC

