

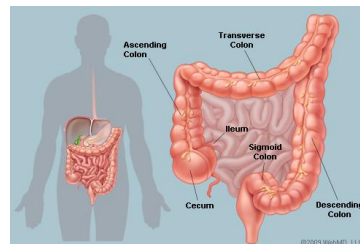
Colorectal cancer risk in patients undergoing colonoscopic polypectomy: a large population-based study

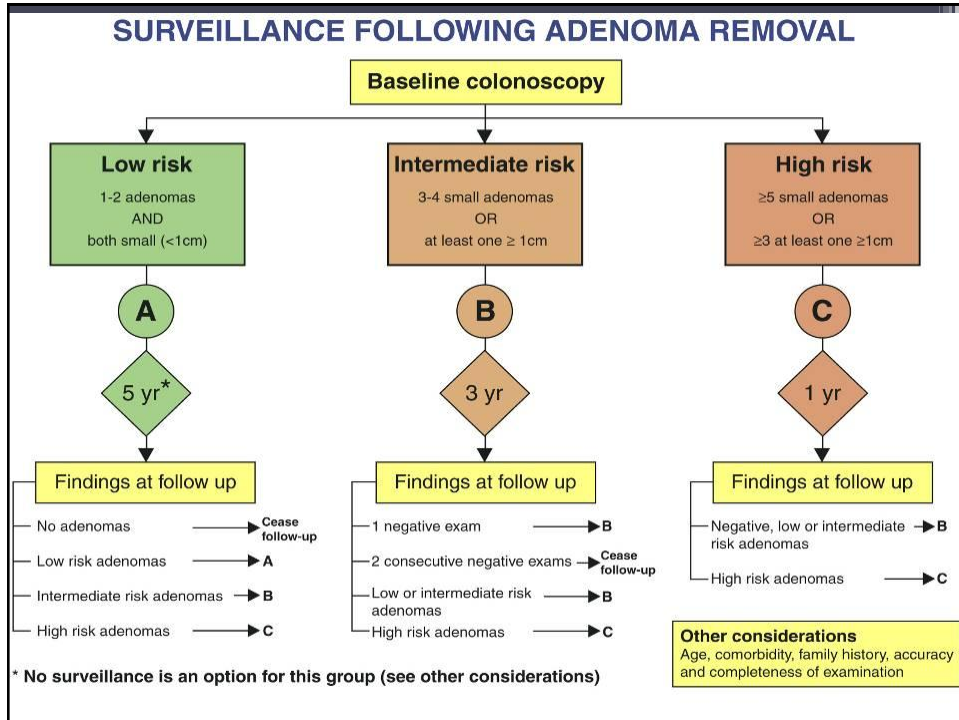
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Colorectal cancer

- Colorectal cancer is the third most commonly diagnosed cancer in UK (Cancer Research UK)
- Colorectal cancer risk increases with age and is slightly more common in men
- Most colorectal cancers arise from precancerous lesion (polyps)
 - Adenoma (+)
 - Hyperplastic (-?)
- But survival rates have not improved



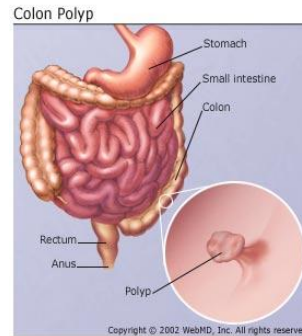


Aim

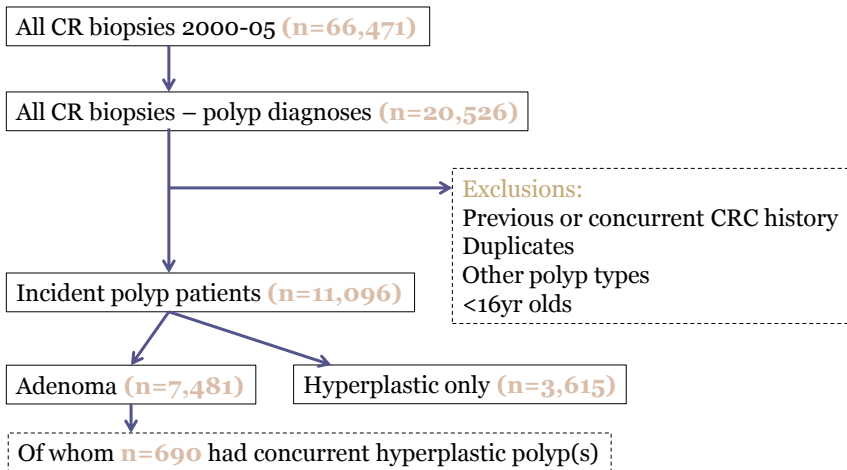
To quantify colorectal cancer risk following polypectomy
(outside of bowel cancer screening programmes)
in a large population-based study

The Northern Ireland Colorectal polyp register

Register of every adult
in Northern Ireland
diagnosed with colorectal polyps
since 2000



The Northern Ireland Colorectal polyp register



Registers matched to NI Cancer Registry for colorectal cancer diagnoses up to 2010



Registers matched to NI Cancer Registry for colorectal cancer diagnoses up to 2010



Registers matched to NI General Register Office for deaths up to 2010

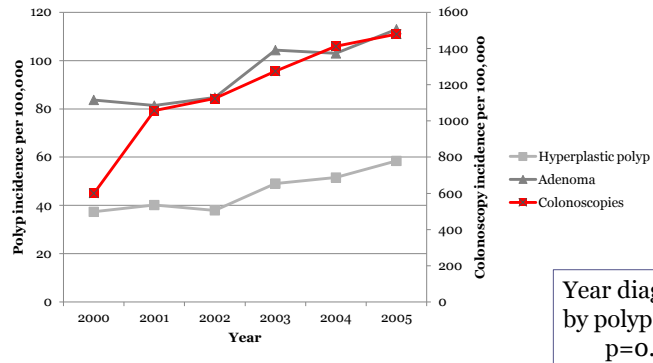
Statistical analysis

- Descriptive characteristics between adenoma and hyperplastic polyp patients compared using chi-squared or independent t-tests
- Colorectal cancer SIRs calculated per 100,000 population and per 100-person years of follow-up (% per year)
- Cox proportional hazards models applied
- Patients with <6months follow-up excluded

Patient demographics

Characteristic	Adenoma <i>n</i> (%)	Hyperplastic <i>n</i> (%)	p-value
Sex			
Male	4,105 (54.9)	1,884 (52.1)	0.006
Female	3,376 (45.1)	1,731 (47.9)	
Age at polyp diagnosis (<i>mean ± SD, years</i>)	63.1 ± 13.2	55.7 ± 13.4	<0.001
Topography index polyp(s)			
Colon	5,266 (70.4)	2,067 (57.2)	<0.001
Rectum	2,099 (26.9)	1,484 (41.0)	
Colon & rectum	206 (2.7)	64 (1.8)	
Number index polyp(s)			
1	5,801 (77.6)	3,510 (97.1)	<0.001
2	1,446 (19.3)	102 (2.8)	
≥3	234 (3.1)	3 (0.1)	

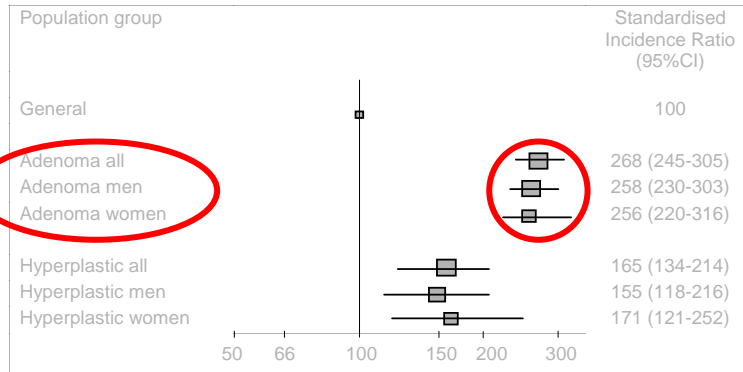
Polyp incidence v colonoscopies over time



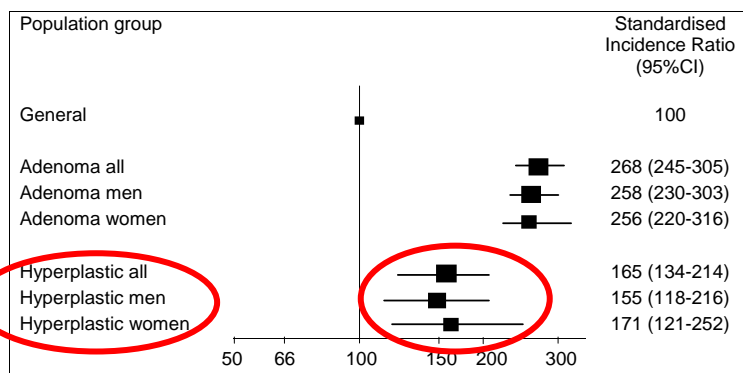
Results

- Mean follow-up 7.0 (\pm 2.3) years (range 0.5-11 years)
- Total **74,351** person-years of follow-up
- **n=238** colorectal cancers diagnosed
- n=196 in adenoma register: **0.41 (95% CI 0.35-0.47)** % per year
- n=42 in hyperplastic register: **0.16 (95% CI 0.12-0.22)** % per year

Colorectal cancer incidence after polypectomy



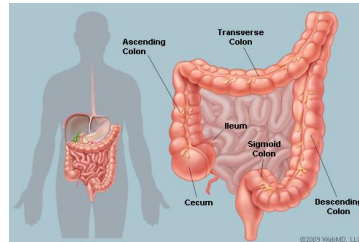
Colorectal cancer incidence after polypectomy



Colorectal cancer risk

Characteristic	Adenoma HR (95 % CI)	Hyperplastic HR (95 % CI)
Sex		
Female	1.00	1.00
Male	1.65 (1.23-2.22)	1.43 (0.77-2.65)
Age group (years)		
<40	1.00	1.00
40-<50	0.95 (0.36-2.50)	0.30 (0.03-3.28)
50-<60	1.17 (0.48-2.81)	1.35 (0.27-6.70)
60-<70	1.81 (0.78-4.21)	6.33 (1.48-27.09)
70-<80	2.95 (1.27-6.81)	7.26 (1.62-32.49)
≥80	5.63 (2.36-13.40)	3.38 (0.30-37.46)
Topography index polyp(s)		
Colon	1.00	1.00
Rectum	1.56 (1.17-2.09)	0.87 (0.47-1.63)
Number index polyp(s)		
1	1.00	1.00
≥2	0.98 (0.70-1.38)	1.74 (0.42-7.21)

Colorectal cancer risk



- Lower colorectal cancer risk seen in:

Patients with **Tubular** adenomas

HR 0.64 (95% CI 0.45-0.91)

Patients with concurrent **hyperplastic polyps**

HR 0.50 (95% CI 0.25-0.98)

Conclusions

- Colorectal cancer risk remains elevated in patients who have undergone polypectomy
- Increased risk observed for *both* adenoma and hyperplastic polyp patients
- Older age, males and those with rectal adenomas at increased risk
- Findings have implications for surveillance guidelines
- Further work ongoing

Acknowledgements

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Any questions?

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