Post-polypectomy follow-up after removal of colorectal neoplasia

Post-polypectomy colonoscopy surveillance: European Society of Gastrointestinal Endoscopy (ESGE) Guideline

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Institutions Institutions are listed at the end of article.

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Bibliography
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This Guideline is an official statement of the European Society of Gastrointestinal Endoscopy (ESGE). The Grading of Recommendations Assessment, Development, and Evaluation (GRADE) system was adopted to define the strength of recommendations and the quality of evidence.

Main recommendations: The following recommendations for post-polypectomy endoscopic surveillance should be applied only after a high quality baseline colonoscopy with complete removal of all detected neoplastic lesions.

1 In the low risk group (patients with 1–2 tubular adenomas < 10 mm with low grade dysplasia), the ESGE recommends participation in existing national screening programmes 10 years after the index colonoscopy. If no screening programme is available, repetition of colonoscopy 10 years after the index colonoscopy is recom-

3 In the high risk group, if no high risk adenomas are detected at the first surveillance examination, the ESGE suggests a 5-year interval before a second surveillance colonoscopy (weak recommendation, low quality evidence). If high risk adenomas are detected at first or subsequent surveillance examinations, a 3-year repetition of surveillance colonoscopy is recommended (strong recommendation, low quality evidence).

4 The ESGE recommends that patients with serrated polyps < 10 mm in size with no dysplasia

The D... Stater Metho...

Amir Qase... Committee...

...elines

Table 1. The American College of Physicians' Guideline Grading System*

Quality of Evidence	Strength of Recommendation	
	Benefits Clearly Outweigh Risks and Burden OR Risks and Burden Clearly Outweigh Benefits	Benefits Finely Balanced With Risks and Burden
High	Strong	Weak
Moderate	Strong	Weak
Low	Strong	Weak
Insufficient evidence to determine net benefits or risks		

* Adopted from the classification developed by the GRADE (Grading of Recommendations, Assessment, Development, and Evaluation) workgroup.

Post-polypectomy endoscopic surveillance

For each type of polyp

BENEFIT

1. What is the **risk of CRC/Adv. Neo.** (AN) **w/out surveillance**?

2. What is the **efficacy** of end. **surveillance** in reducing CRC risk?

BURDEN

3. **How many** pts. present with this type of lesions?

1. Low-risk Group (LR-G)

1-2 tubular <10 mm adenoma(s) with LGD

Post-polypectomy endoscopic surveillance

Low-risk Group (LR-G)

BENEFIT

1. What is the **risk of CRC/Adv. Neo.** (AN) **w/out surveillance**?
    - **vs. general population (CRC)**

Life-time CRC risk: LR-G

-LR-A cohort vs. general population

First author	Variable	Low risk	High risk
Atkin [62]	SIR (95 %CI)	0.5 (0.1 – 1.3)	3.6 (2.4 – 5.0)
Cottet [18]	SIR (95 %CI)	0.8 (0.4 – 1.5)	4.3 (2.9 – 6.0)

-Case (CRC) vs. controls (no CRC)

Colonoscopy with polypectomy,	Adjusted OR	95% CI
< 3 years ago	0.2	0.1 to 0.2
3-5 years ago	0.4	0.2 to 0.6
6-10 years ago	0.8	0.4 to 1.5

Brenner, JCO 2012

The NEW ENGLAND JOURNAL of MEDICI

Long-Term Colorectal-Cancer after Adenoma R

Magnus Løberg, M.D., Mette Kalager, M.D., Ph., Geir Hoff, M.D., Ph.D., Hans-Olov Adami, M.D., Ph. er, M.D., Ph.D.

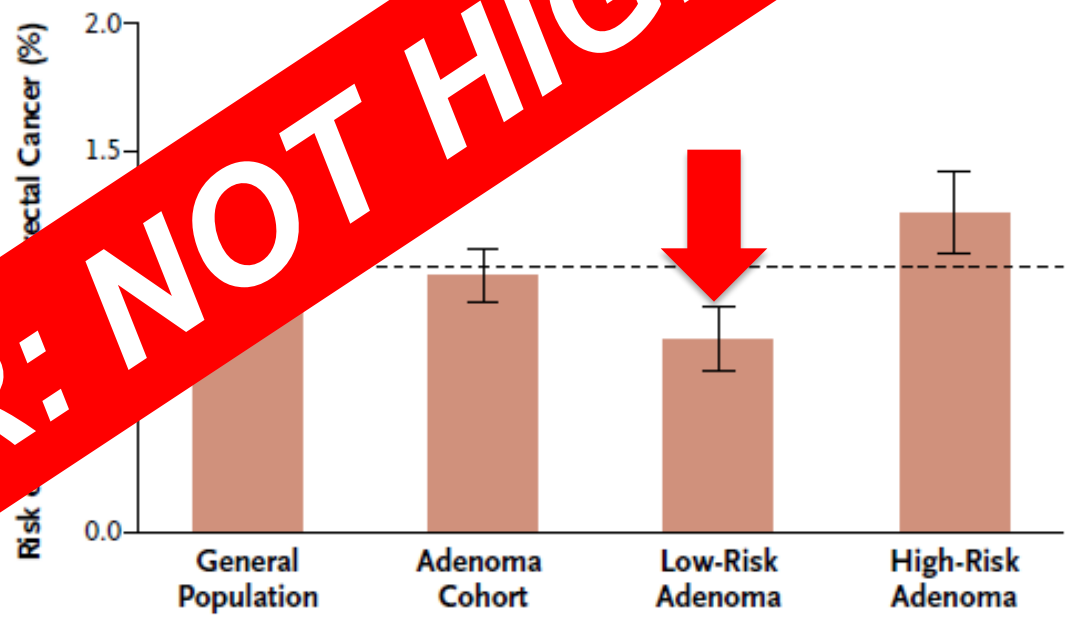


Figure 1. Colorectal-Cancer Mortality in a Cohort of Patients Who Underwent Removal of Adenomas and in the General Population.

LR: NOT HIGHER CRC!

Post-polypectomy endoscopic surveillance

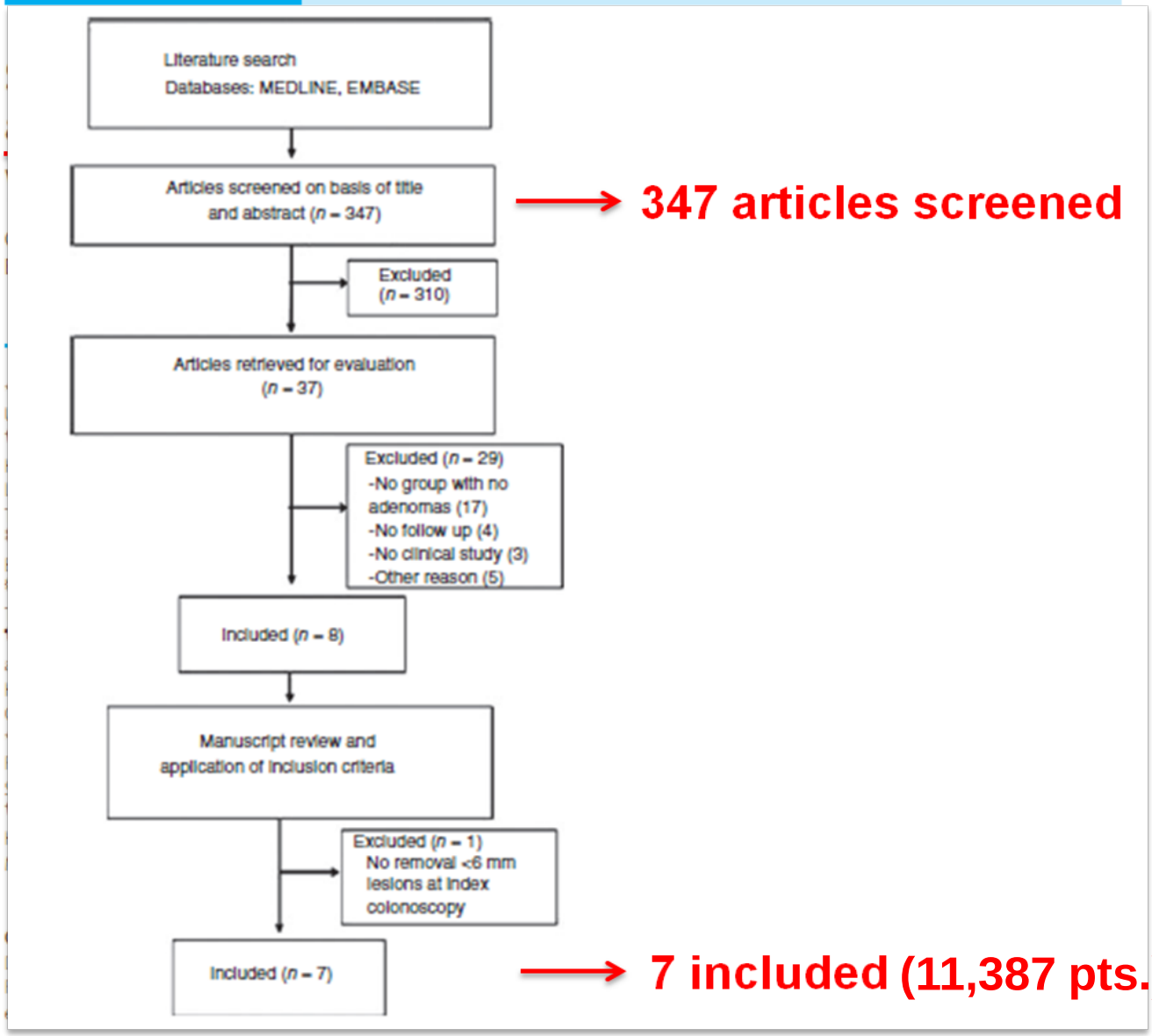
Low-risk Group (LR-G)

BENEFIT

1. What is the **risk of CRC/Adv. Neo.** (AN) **w/out surveillance**?
    - **vs. general population (CRC)**
    - **vs. no-adenoma population (AN)**

LR-A vs. no-A: Advanced Neoplasia incidence

AP&T Alimentary Pharmacology and Therapeutics



→ 347 articles screened

→ 7 included (11,387 pts.)

LR-A vs. no-A: Advanced Neoplasia incidence

AP&T Alimentary Pharmacology and Therapeutics

Systematic review with meta-analysis: the incidence of advanced neoplasia after polypectomy in patients with and without low-risk adenomas

C. Hassan*, A. Gimeno-García†,‡, M. Kalager§,¶, C. Spada*, A. Zullo*, G. Costamagna*, C. Senore**, D. K. Rex†† & E. Quintero†,‡

Synthesis of results

The detection rate of post-polypectomy advanced neoplasia was 3.6% in the LOW-RISK and 1.6% in the CONTROL groups. As shown in Figure 2, the incidence

LR-A vs. no-A: Advanced Neoplasia incide

AP&T Alimentary Pharmacology

Systematic review with meta-analysis: th of advanced neoplasia after polypectom with and without low-risk adenomas

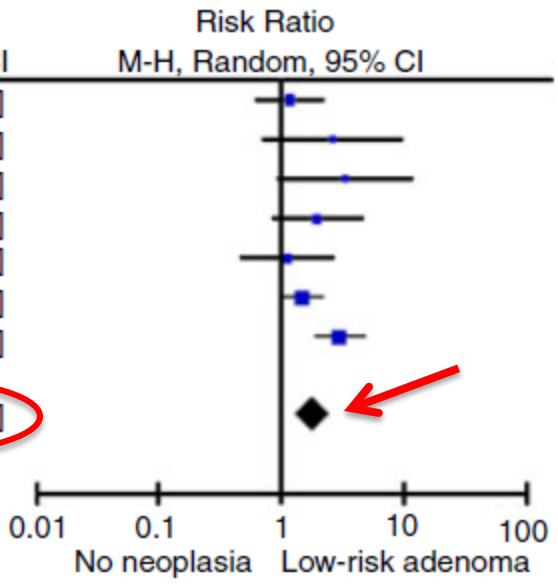
C. Hassan*, A. Gimeno-García†,‡, M. Kalager§,¶, C. Costamagna*, C. Senore**, D. K. Rex†† & E. Quintero†,‡

LR: HIGHER AN!

Study or Subgroup	Low-risk adenoma Events			Weight	Risk Ratio M-H, Random, 95% CI
Chung	16		2	17.2%	1.18 [0.64, 2.20]
Huang			301	5.8%	2.68 [0.73,9.75]
Leung		6	401	6.2%	3.30 [0.95, 11.43]
Lieberman		7	298	11.6%	1.97 [0.86, 4.54]
Miller		10	197	10.8%	1.12 [0.47, 2.69]
Pinsky	765	36	785	25.5%	1.48 [0.98, 2.24]
Yama	1818	30	4084	22.9%	3.00 [1.87, 4.79]
	4079		7308	100.0%	1.83 [1.31, 2.56]
	148	119			

Heterogeneity: Tau² = 0.07; Chi² = 9.54, df = 6 (P = 0.15); I² = 37%

Test for overall effect: Z = 3.52 (P = 0.0004)



Post-polypectomy endoscopic surveillance

Low-risk Group (LR-G)

BENEFIT

1. What is the **risk of CRC/Adv. Neo.** (AN) **w/out surveillance**?

2. What is the **efficacy** of end. **surveillance** in reducing CRC risk?

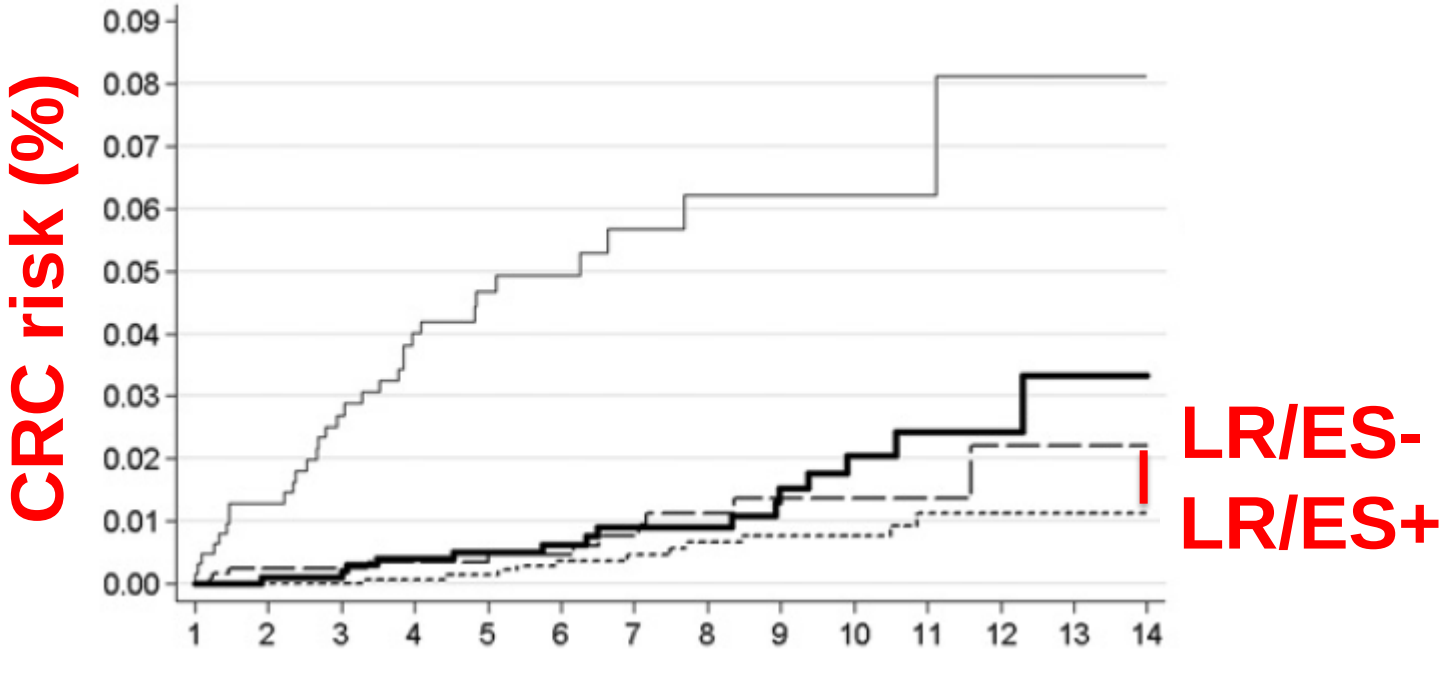
Efficacy of surveillance in LR-G

ORIGINAL ARTICLE

Gut 2012;**61**:1180–1186. doi:10.1136/gutjnl-2011-300295

Long-term risk of colorectal cancer after adenoma removal: a population-based cohort study

Vanessa Cottet,[1,2,3] Valérie Jooste,[1,2] Isabelle Fournel,[1,2] Anne-Marie Bouvier,[1,2,3,4,5] Jean Faivre,[1,2,3] Claire Bonithon-Kopp[1,2,4,5]



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	…enomas			
	…s at risk	Observed cases	SIR	95% CI
Colonoscopic follo…				
At least …	12 328	11	0.60	0.30 to 1.07
No …	7362	11	0.82	0.41 to 1.47
	3736	4	0.61	0.17 to 1.57

SURVEILLANCE: NO EFFICACY!

Post-polypectomy endoscopic surveillance

Low-risk Group (LR-G)

BENEFIT

1. What is the **risk of CRC/Adv. Neo.** (AN) **w/out surveillance**?

2. What is the **efficacy** of end. **surveillance** in reducing CRC risk?

BURDEN

3. **How many** pts. present with this type of lesions?

Prevalence of LR-G with HD

GASTROENTEROLOGY

High Yields of Small and Flat Adenomas With High-D… Colonoscopes Using Either White Light or Narrow… …ng

DOUGLAS K. REX, and CLAIRE C. HELBIG

	Sc…	…BI (n = 124)	P value
	…6	60.6	.88
	…2 (47)	66 (53)	.29
≥1 adenom…	77 (58)	71 (57)	.91
≥1 ade…	70 (53)	66 (53)	.92
≥1…	14 (11)	16 (13)	.55
…cm	6 (5)	6 (5)	.90
…as	189	208	.73
…omas 0–5 mm	159	177	.79
…adenomas 6–9 mm	17	24	.54
…otal adenomas ≥1 cm	7	7	.90

>50% LR: BIG BURDEN!

GASTROENTEROLOGY 2010;138:2292–2299

CLINICAL–ALIMENTARY TRACT

Surveillance Colonoscopy Is Cost-Effective for Patients With Ade
Who Are at High Risk of Colorectal Cancer

SAMEER D. SAINI,*,‡ PHILIP SCHOENFELD,*,‡ and SANDEEP VIJAN‡,§

*Division of Gastroenterology and §Department of Internal Medicine, University of Michigan Medical School, A (VA) Health Services Research and Development Center of Excellence, Center for Clinical Management Research, Ann Arbor

Table 4. Costs, QALYs of Surveillance Strategies

Strategy	Av Cost	Average QALYs	ICER
10/10	1775	17.5728	—
3	$1831	17.5826	$5743
	$3170	17.5871	$296266
	$4936	17.5848	Dominated

ity compared with the 10/10 strategy is shown in parentheses.

HR

SURVEILLANCE: NO CONVENIENT!

Low-risk Group (LR-G)

CRC risk	→	**Low/not increased**
Surveillance efficacy	→	**No**
Convenient	→	**No**
BURDEN	→	**High**

Low-risk Group (LR-G)

Post-polypectomy colonoscopy surveillance: European Society of Gastrointestinal Endoscopy (ESGE) Guideline

Low risk group

In the low risk group (patients with 1–2 tubular adenomas < 10 mm with low grade dysplasia), the ESGE recommends participation in existing national screening programmes 10 years after the index colonoscopy. If no screening programme is available, repetition of colonoscopy 10 years after the index colonoscopy is recommended (strong recommendation, moderate quality evidence).

1. **Low-risk Group (LR-G)**

   1-2 tubular <10 mm adenoma(s) with LGD

2. **High-risk Group (HR-G)**

   ≥10 mm/villous/HGD or >3 adenoma(s)

Post-polypectomy endoscopic surveillance

High-risk Group (HR-G)

BENEFIT

1. What is the **risk of CRC/Adv. Neo.** (AN) **w/out surveillance**?

Life-time CRC risk: HR-G

-HR-A cohort vs. general population

First author	Variable	Low risk	High risk
Atkin [62]	SIR (95 %CI)	0.5 (0.1 – 1.3)	3.6 (2.4 – 5.0)
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HR: HIGHER CRC!

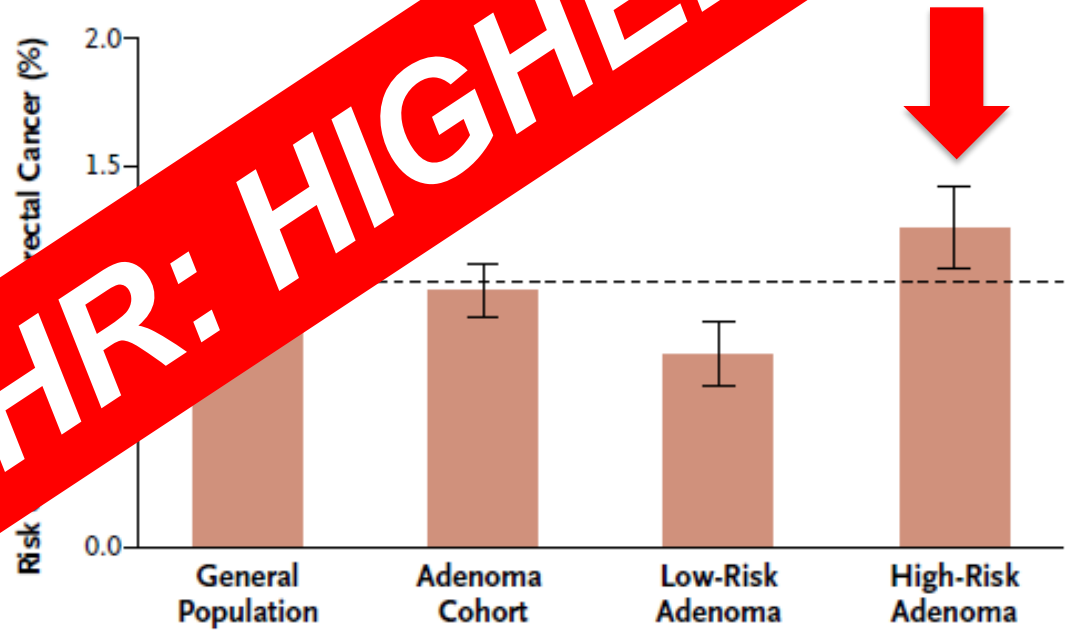

Figure 1. Colorectal-Cancer Mortality in a Cohort of Patients Who Underwent Removal of Adenomas and in the General Population.

HR-G vs. LR-G:Advanced Neoplasia incid e

GASTROENTEROLOGY

A Pooled Analysis of Advanced Colorectal Neoplasia Di
Colonoscopic Polypectomy

MARÍA ELENA MARTÍNEZ,[*,‡] JOHN A. BARON,[§] DAVID A. LIEBERMAN,[‖] A INE LANZA,[#]
SIDNEY J. WINAWER,[**] ANN G. ZAUBER,[‡‡] RUIYUN JIANG,[*,‡] DENNIS BOND,[‖‖]
TIMOTHY R. CHURCH,[¶¶] DOUGLAS J. ROBERTSON,[##] STEPHANI ELIZABETH T. JACOBS,[*,‡]
DAVID S. ALBERTS,[*,‡,‡‡‡] and E. ROBERT GREENBERG[§,§§§]

HR: HIGHER AN!

Characteristic	oma, % (95% CI)	Cancer, % (95% CI)
Low-risk gr	.9 (6.2–7.6)	0.5 (0.3–0.7)
High-ris	15.5 (14.5–16.6)	0.8 (0.5–1.0)

Post-polypectomy endoscopic surveillance

High-risk Group (HR-G)

BENEFIT

1. What is the **risk of CRC/Adv. Neo.** (AN) **w/out surveillance**?

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Efficacy of surveillance in HR-G

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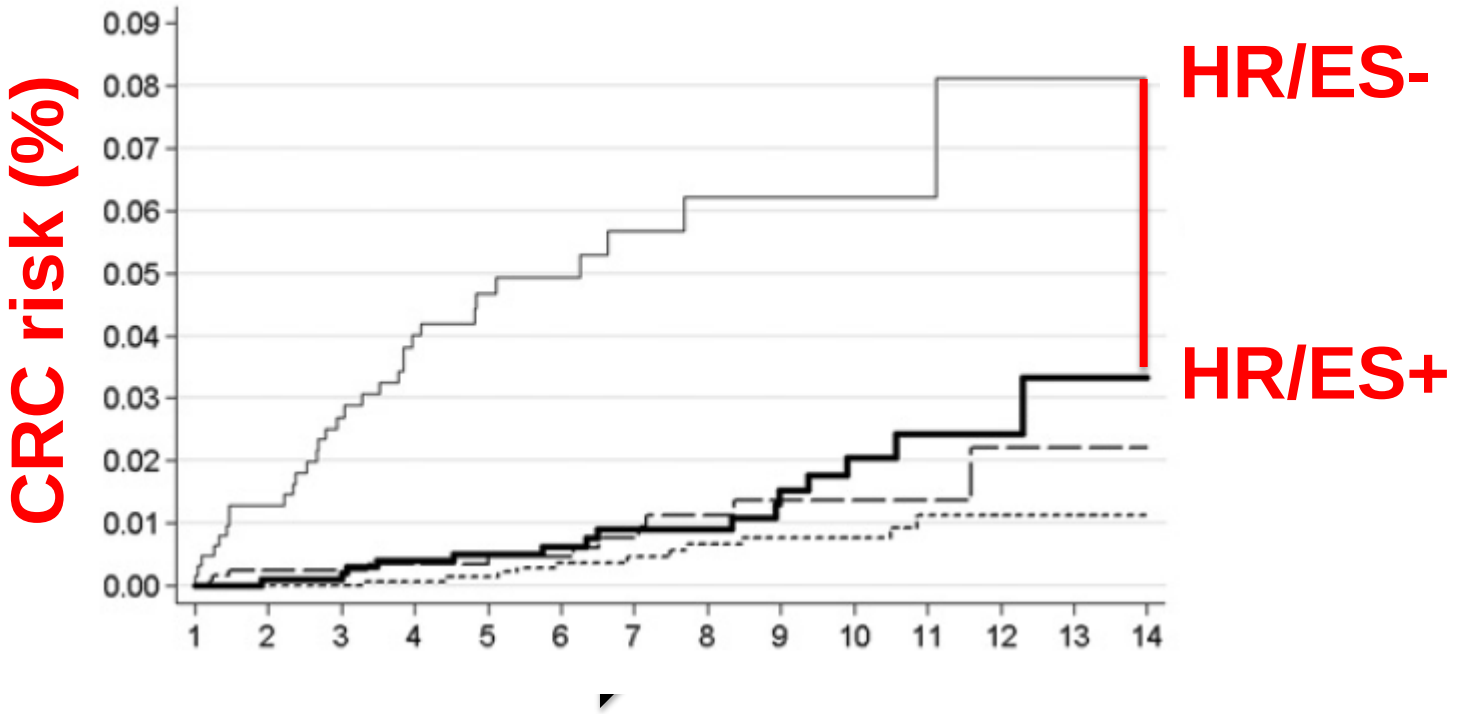

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	…omas			
	…ars at risk	Observed cases	SIR	95% CI
Colonoscopic follo…				
At least o…	7588	15	1.10	0.62 to 1.82
No o…	3259	31	4.26	2.89 to 6.04
	1335	7	2.46	0.99 to 5.08

SURVEILLANCE: YES EFFICACY!

Post-polypectomy endoscopic surveillance

High-risk Group (HR-G)

BENEFIT

1. What is the **risk of CRC/Adv. Neo.** (AN) **w/out surveillance**?

2. What is the **efficacy** of end. **surveillance** in reducing CRC risk?

BURDEN

3. **How many** pts. present with this type of lesions?

Prevalence of HR-G with HD

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High Yields of Small and Flat Adenomas With High-D… Colonoscopes Using Either White Light or Narrow… …ing

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SAMEER D. SAINI,*,‡ PHILIP SCHOENFELD,*,‡ and SANDEEP VIJAN‡,§

*Division of Gastroenterology and §Department of Internal Medicine, University of Michigan Medical School, Ann A… …y Health Services Research and Development Center of Excellence, Center for Clinical Management Research, Ann Arbor, Mi…

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		$4936	17.5848	Dominated

…ity compared with the 10/10 strategy is shown in parentheses.

HR

SURVEILLANCE: CONVENIENT!

High-risk Group (HR-G)

CRC risk	→	Increased
AN risk	→	Increased
Surveillance efficacy	→	Yes
Convenient	→	Yes
BURDEN	→	Small

High-risk Group (LR-G)

Post-polypectomy colonoscopy surveillance: European Society of Gastrointestinal Endoscopy (ESGE) Guideline

High risk group

In the high risk group (patients with adenomas with villous histology or high grade dysplasia or ≥10 mm in size, or ≥3 adenomas), the ESGE recommends surveillance colonoscopy 3 years after the index colonoscopy (strong recommendation, moderate quality evidence). Patients with 10 or more adenomas should be referred for genetic counselling (strong recommendation, moderate quality evidence).

1. **Low-risk Group (LR-G)**
   1-2 tubular <10 mm adenoma(s) with LGD

2. **High-risk Group (HR-G)**
   ≥10 mm/villous/HGD or >3 adenoma(s)

3. **Serrated polyp (SP)**
   Hyperplastic, serrated sessile, etc.

Post-polypectomy endoscopic surveillance

Serrated polyp (SP)

BENEFIT

1. What is the **risk of CRC/Adv. Neo.** (AN) **w/out surveillance**?

2. What is the **efficacy** of end. **surveillance** in reducing CRC risk?

Serrated polyps

- Long-term **CRC risk** with SP **unknown**

- One small study suggested a **higher risk** of **AN** at **surveillance** in pts. with sessile serrated lesions

- Pts. with **large** or **proximal** sessile serrated lesions at **higher risk** of **synchronous AN**

- **No evidence** on **efficacy** of end. **surveillance** in pts. with SP

Post-polypectomy endoscopic surveillance

Serrated polyp (SP)

BENEFIT

1. What is the **risk of CRC/Adv. Neo.** (AN) **w/out surveillance**?

2. What is the **efficacy** of end. **surveillance** in reducing CRC risk?

BURDEN

3. **How many** pts. present with this type of lesions?

Prevalence of LARGE SP

Volume 78, No. 2 : 2013 GASTROINTEST

ORIGINAL ARTICLE: Clinical Endoscopy

Relationship of colonoscopy-detected serr… synchronous advanced neoplasia in av… viduals CME

Cristina Álvarez, MD,*[,1] Montserrat Andreu, MD,[1] A… que Quintero, MD,[3]

TABLE 1. C… …nts included in the study (n…

P… …l polyps‡	329 (6.5)
…rated polyps‡	90 (1.8)
…ge serrated proximal polyps‡	36 (0.7)

2% HR: SMALL BURDEN!

Serrated Polyps (SP)

CRC risk	→	Uknown
AN risk	→	Increased (sinchronous)
Surveillance efficacy	→	Uknown
Convenient	→	Uknown
BURDEN	→	Small

Sessile polyps (SP)

Post-polypectomy colonoscopy surveillance: European Society of Gastrointestinal Endoscopy (ESGE) Guideline

The ESGE recommends that patients with serrated polyps < 10 mm in size with no dysplasia should be classified as low risk (weak recommendation, low quality evidence). The ESGE suggests that patients with large serrated polyps (≥ 10 mm) or those with dysplasia should be classified as high risk (weak recommendation, low quality evidence).

Post-polypectomy colonoscopy surveillance: European Society of Gastrointestinal Endoscopy (ESGE) Guideline