



44. Schweizerische Koloproktologie-Tagung
44^{ème} Journée Suisse de Coloproctologie



SCREENING RECOMMENDATIONS 2022 - EARLY AND SAFE ENOUGH?

STEFAN GROTH

Revidierte Konsensus-Empfehlungen

Nachsorge nach koloskopischer Polypektomie und Therapie des kolorektalen Karzinoms

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im Auftrag des Vorstandes der Schweizerischen Gesellschaft für Gastroenterologie (SGG)**

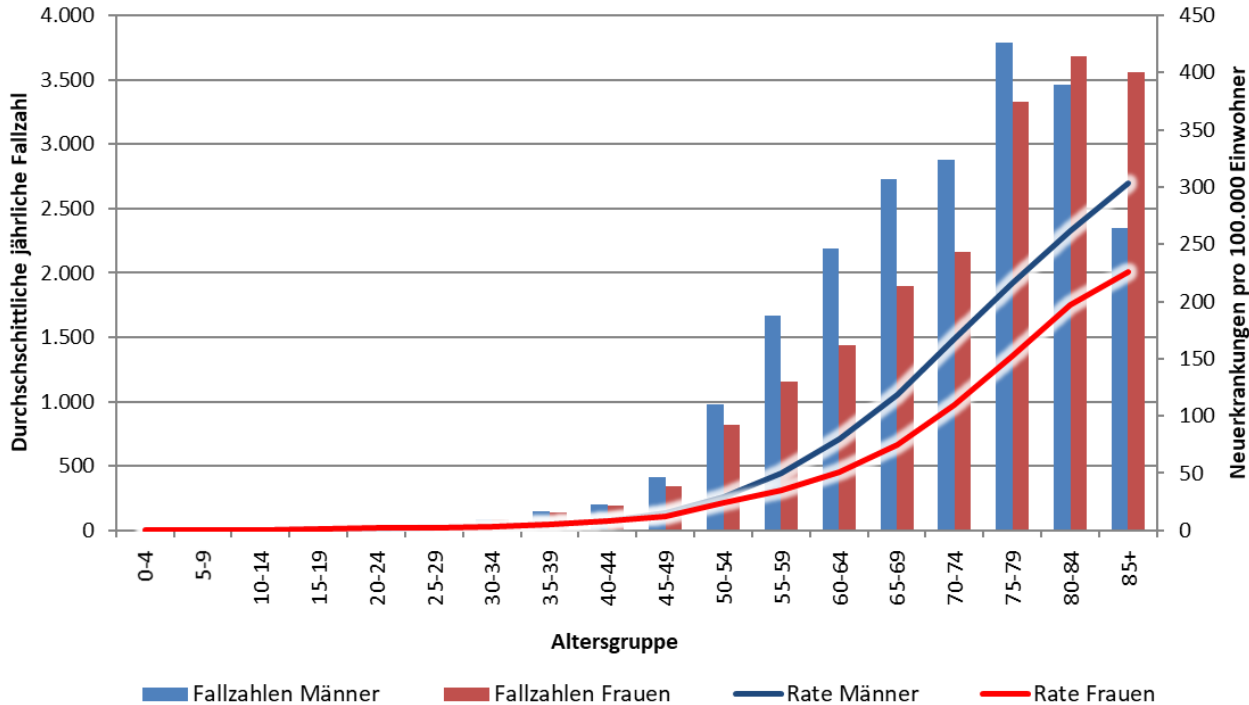
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CH & INTERNATIONAL GUIDELINES

	SGG
Adenomas	2012
1-2 < 10 mm	5y
3-4 < 10 mm	3y
5-10 < 10 mm	3y
<10mm, HGD	3y
Villous component	3y

COLON CANCER INCIDENCE

2018-2020 Germany



Switzerland:

ca. 4300 new Diagnosis
 ca. 1700 related death

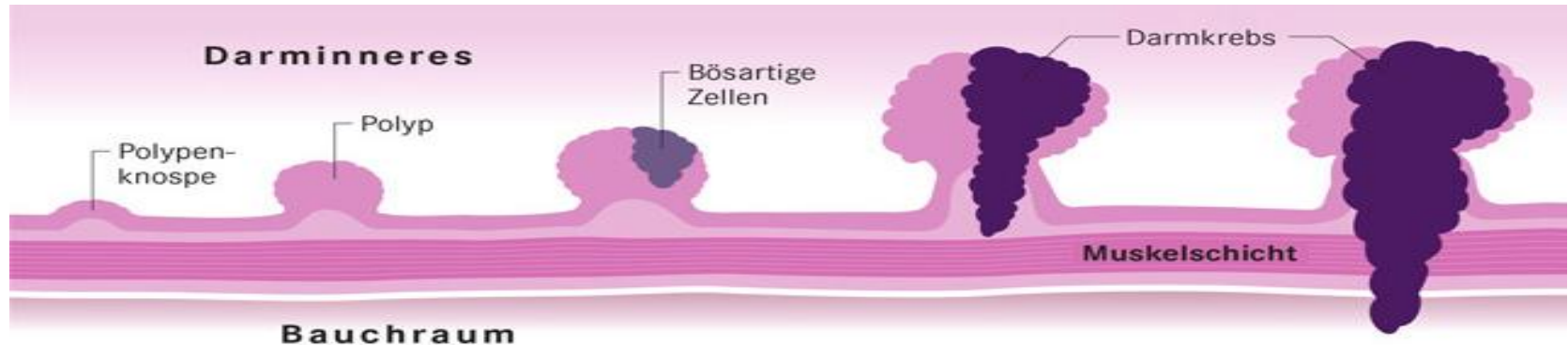
Quelle: Nicer, Onkopedia
 National Institute for Cancer and Epidemiology

IDEA OF SCREENING

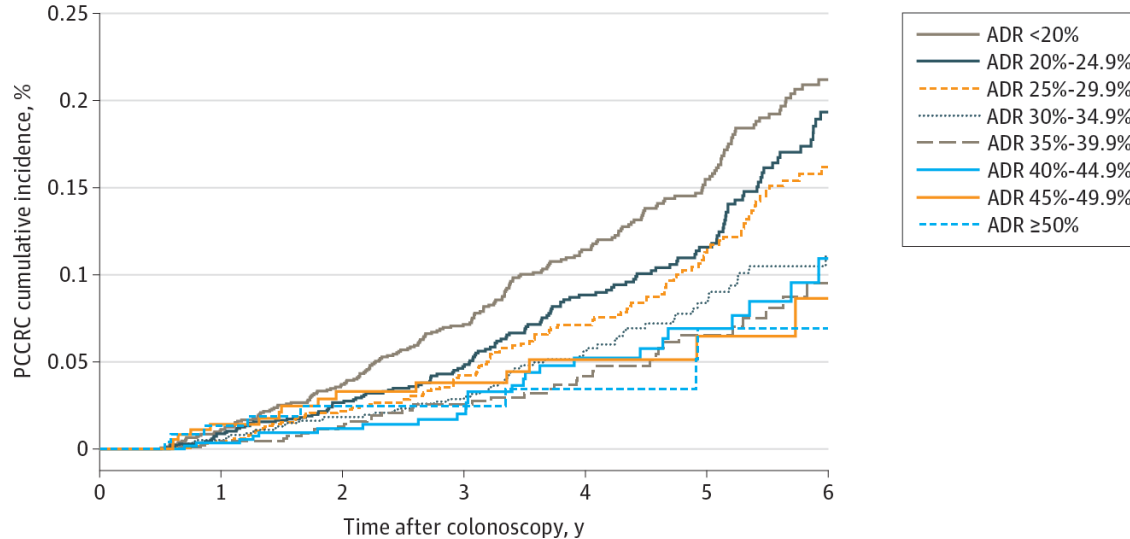
ADENOMA-CARCINOMA-SEQUENCE



10 Jahre



ADENOMA DETECTION RATE (ADR)

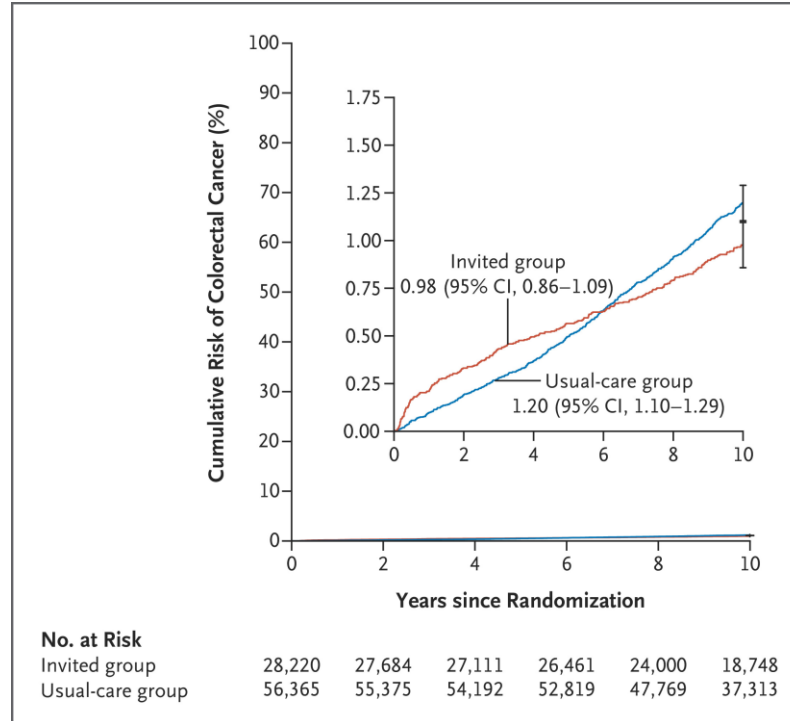


Within 3 large community-based settings, colonoscopies by physicians with higher adenoma detection rates were significantly associated with lower risks of PCCRC across a broad range of adenoma detection rates. Increased rate of adenoma detection associates with reduced risk of colorectal cancer and death.

SCREENING EFFECT ON POPULATION

Nordic Study

N = 85.179
28.220 Colonoscopy
56.365 Control
10y follow-up



31% Risk Reduction
in Colonoscopy Group
over 10 years

IDEA ON SCREENING

- Starting age 50y for everybody at normal risk
- Colonoscopy with high standard
- Remove all polyps you find
- Classify patient into risk groups and recommend screening interval

Exceptions: family history and polyposis / genetic syndromes

QUALITY PARAMETERS - SCREENING

- Life expectancy >10 years
- Optimal Colon Cleansing
- Complete Colonoscopy
- High Adenoma Detection Rate >26%
- Complete Adenoma Resection

COLON CANCER - SEQUENCE

4-7 % Lifetime Risk of developing Colon Cancer

Only 1 in 20 adenomas will develop in Cancer

Slow progression: 10 – 15 years (small polyp to colon cancer)

Finding the people with a high risk for Surveillance

Reduce the Risk to an acceptable rate with minimum Number of prevention

POLYPS

- Polyp amount (and location)
- Polyp Size:
 - < 10mm
 - > 10mm
- Histology:
 - Tub. Adenoma
 - low-grade-Dysplasia
 - high-grade-Dysplasia
 - Hyperplastic Polyp
 - Sessile serrated Adenoma
 - with or without Dysplasia
 - Traditional serrated Adenoma
 - low-grade-Dysplasia
 - high-grade-Dysplasia

LOW-RISK

HIGH-RISK



Serratierte Polypen und Läsionen (HP, SSL, TSA)

Definition

Low-risk

- Grösse: <10 mm
und
- Histologische Faktoren: keine Dysplasie

High-risk

- Grösse: ≥ 10 mm
oder
- Histologische Faktoren: jede Dysplasie
oder
- Traditionell serratiertes Adenom (unabhängig von Grösse und Dysplasiegrad)

Adenomatische Polypen

Definition

Low-risk

- Anzahl: ≤ 4
und
- Grösse: <10 mm
und
- Histologische Faktoren: Low-Grade-Dysplasie

High-risk

- Anzahl: ≥ 5
oder
- Grösse ≥ 10 mm
oder
- Histologische Faktoren: High-Grade-Dysplasie

Serratierte Polypen und Läsionen (HP, SSL, TSA)

Definition

Low-risk

- Grösse: <10 mm
und
- Histologische Faktoren: keine Dysplasie

High-risk

- Grösse: ≥ 10 mm
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- Traditionell serratiertes Adenom (unabhängig von Grösse und Dysplasiegrad)

DIMMINUTIVE POLYPS

Studys on Tubular Adenomas

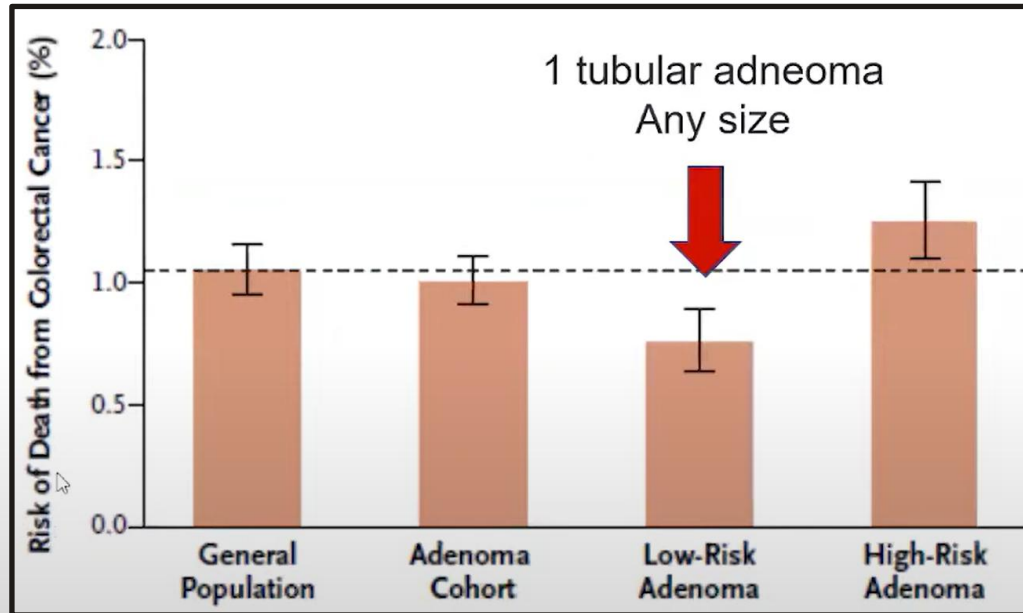
HIGH RISK VS. LOW RISK

HIRSLANDEN

KLINIK HIRSLANDEN



GastroZentrum



Study Norway

N = 40.826

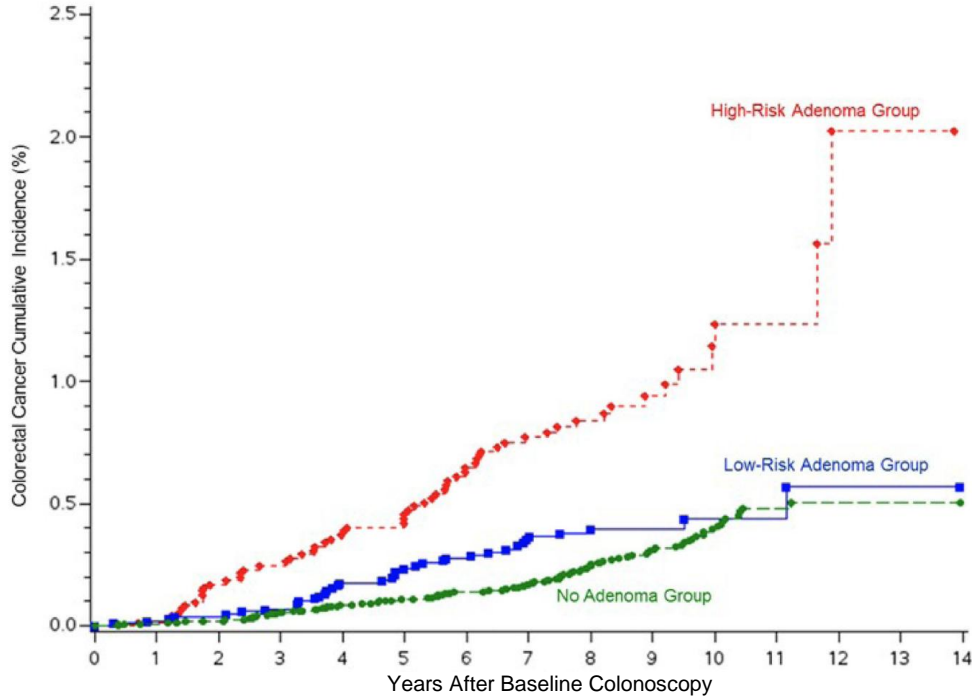
Follow-up: Median 7.7y

Endpoint CRC Mortality

Conclusion:

After a median of 7.7 years of follow-up, colorectal-cancer mortality was lower among patients who had had low-risk adenomas removed and moderately higher among those who had had high-risk adenomas removed, as compared with the general population.

HIGH RISK VS. LOW RISK



Low-Risk = 1 or 2 tubular adenomas with low-grade Dysplasia <10mm

Study USA

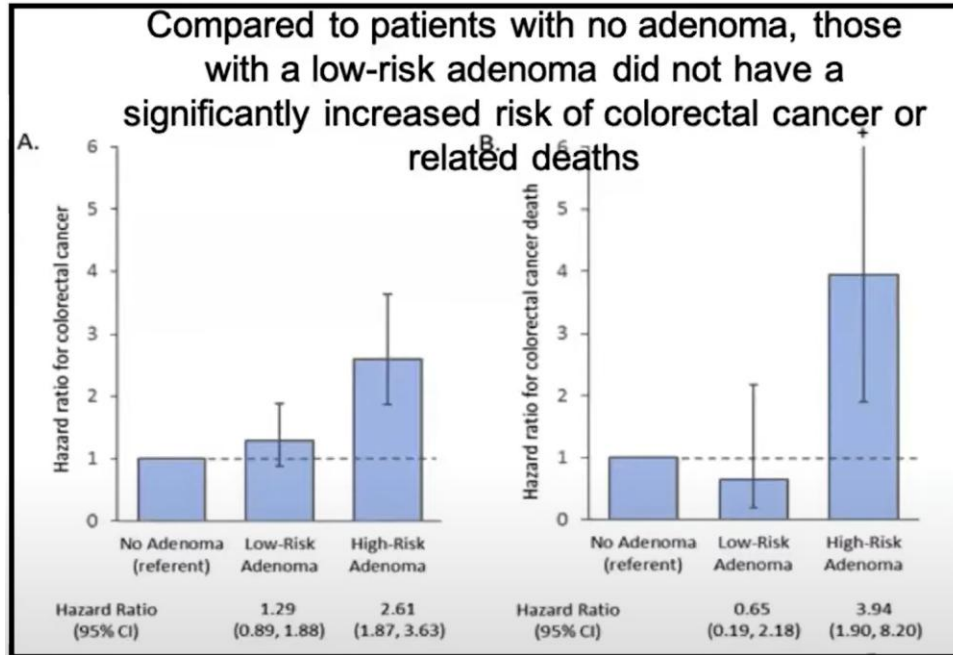
N = 64.422

Follow-up: Median 8.1y

Conclusion:

With up to 14-years of follow-up, high-risk adenomas were associated with an increased risk of CRC and related death, supporting early colonoscopy surveillance. Low-risk adenomas were not associated with a significantly increased risk of CRC or related deaths. These results can inform current surveillance guidelines for high- and low-risk adenomas.

HIGH RISK VS. LOW RISK



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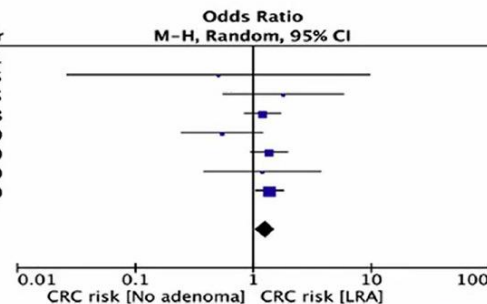
Low-Risk = 1 or 2 tubular adenomas with low-grade Dysplasia <10mm

HIGH RISK VS. LOW RISK

Low-Risk-Adenoma

Study or Subgroup	LRA		No adenoma		Weight	Odds Ratio M-H, Random, 95% CI	Year
	Events	Total	Events	Total			
Chung 2011	0	3020	0	5837		Not estimable	2011
Chiu 2015	0	4605	3	16285	0.4%	0.51 [0.03, 9.78]	2015
Laish 2015	5	1296	6	2798	2.3%	1.80 [0.55, 5.92]	2015
Click 2018	48	67440	71	119775	24.4%	1.20 [0.83, 1.73]	2018
He 2020	6	29080	427	1121070	5.0%	0.54 [0.24, 1.21]	2020
Lee 2020	37	81237	117	348696	23.9%	1.36 [0.94, 1.96]	2020
Liberman 2020	5	5590	7	9320	2.5%	1.19 [0.38, 3.75]	2020
Wieszcy 2020	58	188406	309	1379608	41.5%	1.37 [1.04, 1.82]	2020
Total (95% CI)		380674		3003389	100.0%	1.26 [1.06, 1.51]	

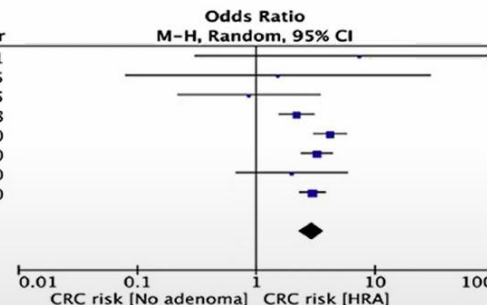
Total events 159 940
Heterogeneity: Tau² = 0.00; Chi² = 5.60, df = 6 (P = 0.47); I² = 0%
Test for overall effect: Z = 2.54 (P = 0.01)



High-Risk-Adenoma

Study or Subgroup	HRA		No adenoma		Weight	Odds Ratio M-H, Random, 95% CI	Year
	Events	Total	Events	Total			
Chung 2011	1	2372	0	5837	0.5%	7.38 [0.30, 181.34]	2011
Chiu 2015	0	1525	3	16285	0.6%	1.52 [0.08, 29.53]	2015
Laish 2015	3	1613	6	2798	2.6%	0.87 [0.22, 3.47]	2015
Click 2018	56	43230	71	119775	20.7%	2.19 [1.54, 3.10]	2018
He 2020	39	24530	427	1121070	22.0%	4.18 [3.01, 5.80]	2020
Lee 2020	60	55210	117	348696	23.0%	3.24 [2.37, 4.43]	2020
Liberman 2020	6	4010	7	9320	4.1%	1.99 [0.67, 5.94]	2020
Wieszcy 2020	72	108218	309	1379608	26.4%	2.97 [2.30, 3.84]	2020
Total (95% CI)		240708		3003389	100.0%	2.92 [2.31, 3.69]	

Total events 237 940
Heterogeneity: Tau² = 0.04; Chi² = 11.71, df = 7 (P = 0.11); I² = 40%
Test for overall effect: Z = 9.00 (P < 0.00001)



Low-Risk = 1 or 2 tubular adenomas with low-grade Dysplasia <10mm

Meta Analysis

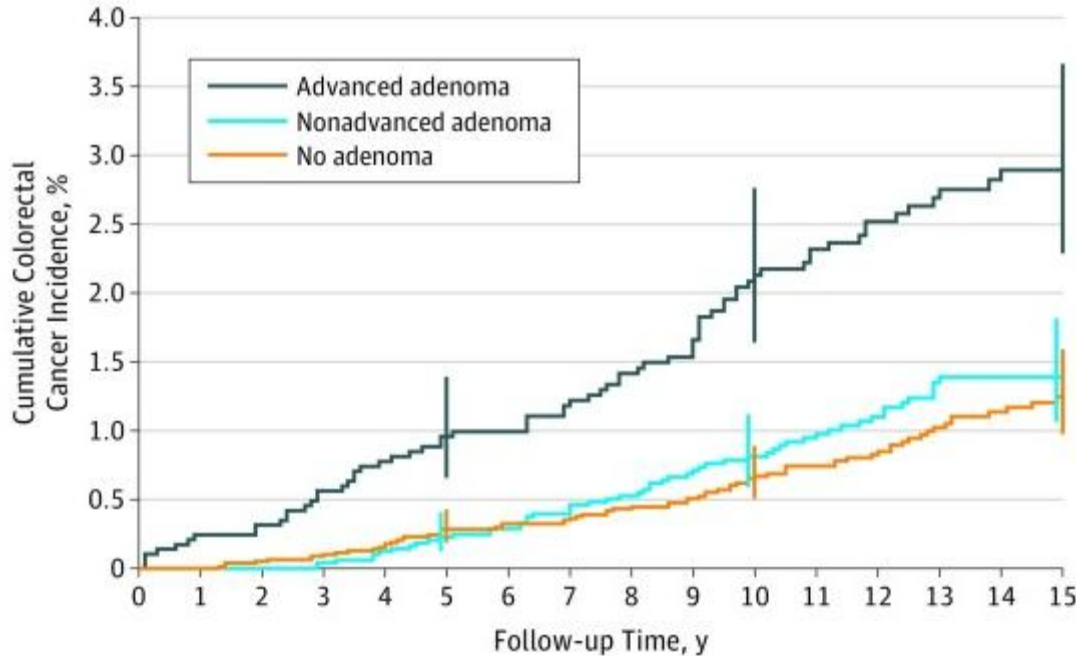
N = 12 studies: 510.019
Follow-up: Median 8.5y

Conclusion:

CRC and mortality is significantly higher for patients with HRAs, but this risk is very low in patients with LRAs, comparable to patients with no adenomas.

HIGH RISK VS. LOW RISK

Multiplicity



USA
N = 15.935
Follow-up: Median 13y

Conclusion:

Over a median of 13 years of follow-up, participants with an advanced adenoma at diagnostic colonoscopy were at significantly increased risk of developing colorectal cancer compared with those with no adenoma. Identification of nonadvanced adenoma may not be associated with increased colorectal cancer risk.

Low-Risk = 1 – 2 or > 3 tubular adenomas with low-grade Dysplasia <10mm

3-4 OR >5 NON ADVANCED ADENOMAS

Multiplicity

The risk of metachronous advanced neoplasia was significantly higher in the 3–4 NAAs group than that in the 1–2 NAAs group, whereas the risk of metachronous advanced neoplasia between the 3–4 NAAs and ≥ 5 NAAs groups was not different.

No significant differences were found in the risks of metachronous colorectal cancer between the 1–2 NAAs and 3–4 NAAs groups and between the 3–4 NAAs and ≥ 5 NAAs groups.

Meta Analysis

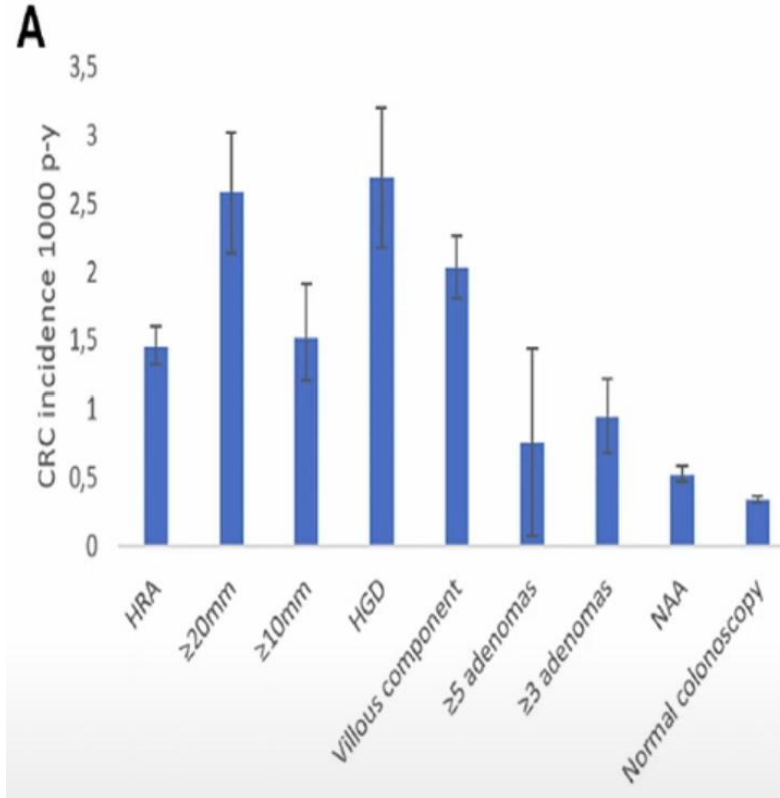
N = 15 Studies: 36.375

Follow-Up: 5y

Conclusion:

The risk of metachronous advanced Neoplasia and CRC between the 3–4 NAAs and ≥ 5 NAAs groups was not different. This suggests that further studies on metachronous AN and CRC risk in the 3–4 NAAs group are warranted to confirm a firm ≥ 5 -year interval surveillance colonoscopy.

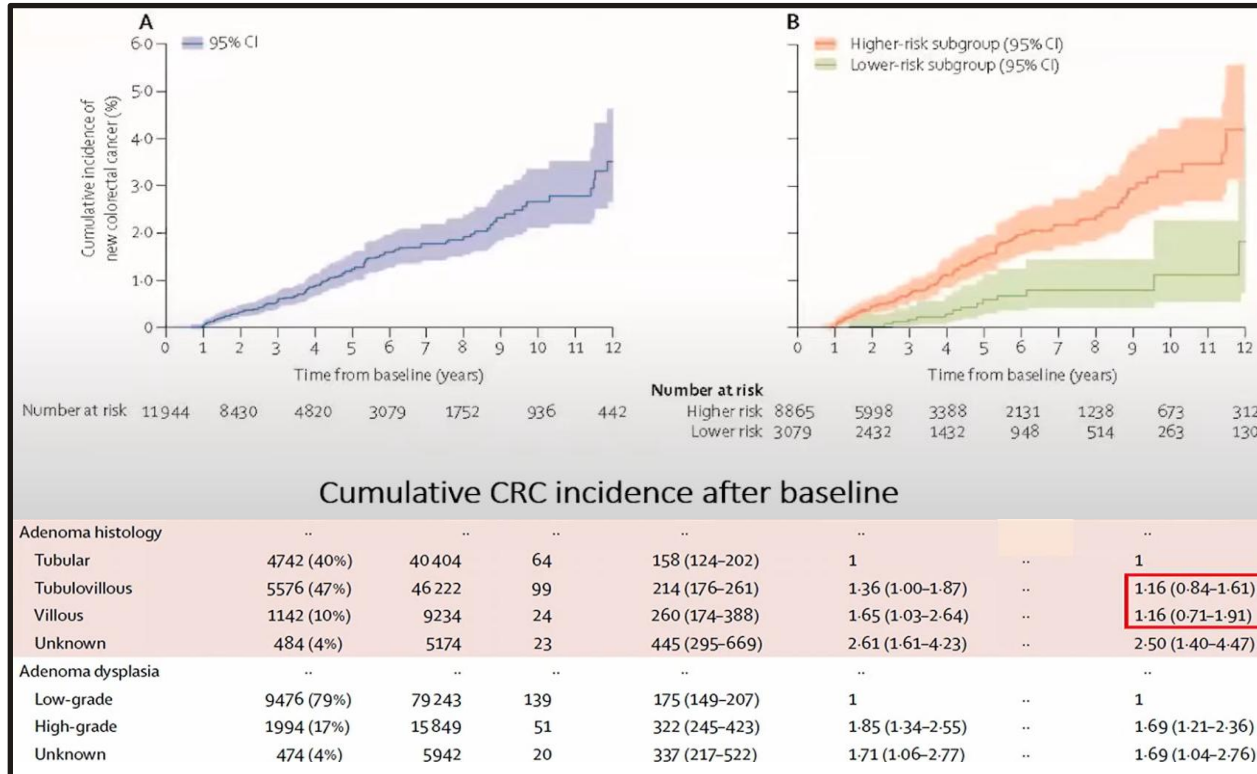
CRC RISK – ADENOMA CHARACTERISTICS



Meta Analysis
N = 55 Studies: 936.540
Follow-Up: 5.4y

Conclusion:
Metachronous CRC risk is highest in patients with baseline adenomas with ≥ 20 mm or HGD. Multiplicity does not seem to be associated with substantially higher CRC risk in the near term.

HISTOLOGY: VILLOUS ADENOMA



Retrospective Multicenter StudyUK

N = 253.798

11.944 with 3-4 Adenomas or at least one larger 10mm

Follow-Up: 7.9y

Conclusion:

No increased risk for tubulovillous or villous histology compared to tubular adenomas.

SERRATED POLYPS

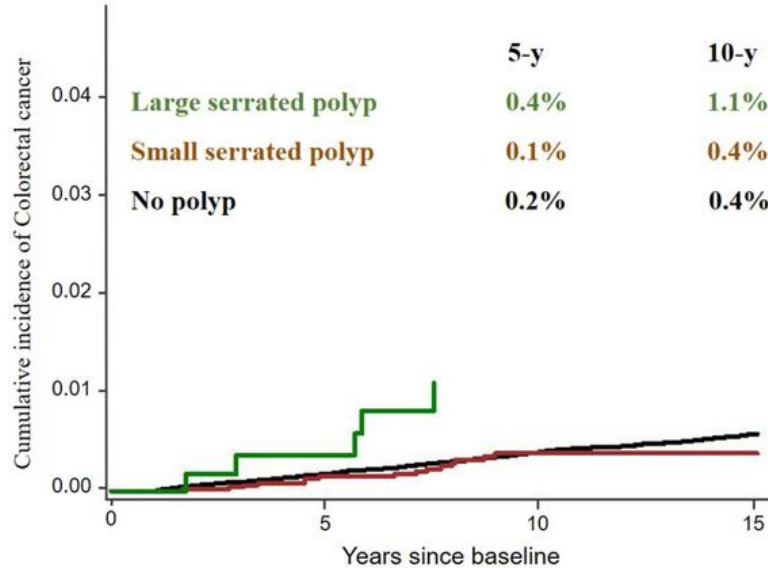
	US
Serrated Polyps	2020
HP < 10mm	10y
SSL < 10mm, 1-2	5-10y
HP > 10mm	3-5y
SSL < 10mm, 3-4	3-5y
SSL < 10mm, 5-10	3y
SSL > 10mm	3y
SSL with any dyspl.	3y
TSA	3y

	ESGE	CH
Serrated Polyps	2020	2022
SP < 10 mm	10y	10y
<p>??? Hyperplastic vs Serrated - Anzahl - ???</p>		
SP > 10mm	3y	3y
SP with dyspl	3y	3y
TSA	3y	3y

Low-Risk-Group

High-Risk-Group

SERRATED POLYPS



N = 122.899

Follow-Up: 10y

Conclusion:

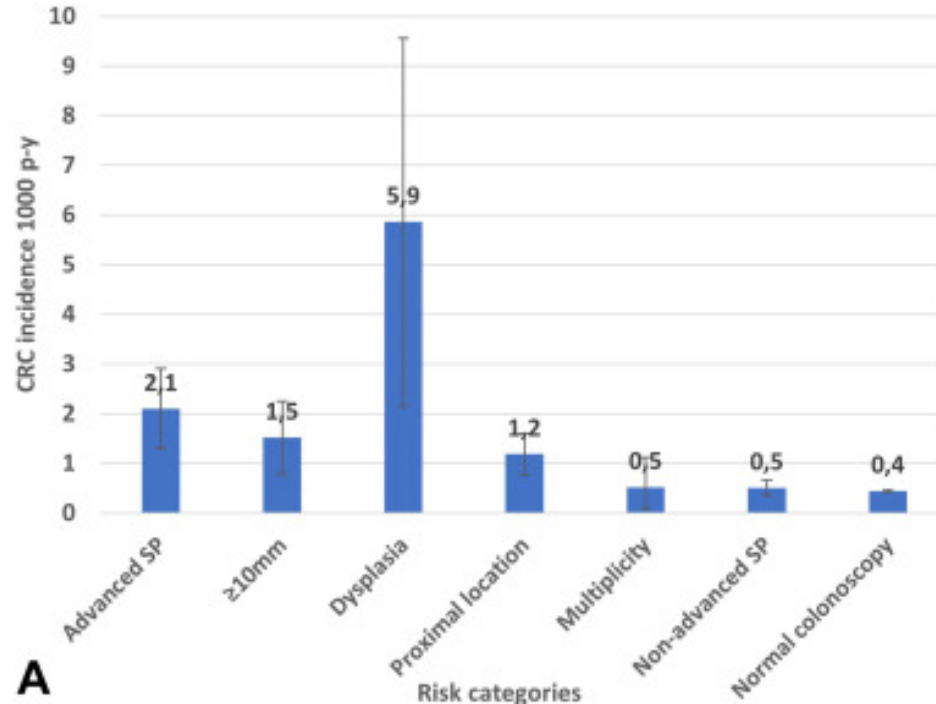
These findings provide support for guidelines that recommend repeat lower endoscopy within 3 years of a diagnosis of large serrated polyps. In contrast, patients with small serrated polyps may not require more intensive surveillance than patients without polyps.

Number at risk

Large serrated polyp	566	483	209	49
Small serrated polyp	5,010	3,148	1,508	514
No polyp	112,107	98,794	56,454	23,754

He et al; Gastroenterology 2020

SERRATED POLYPS



A

Metaanalysis

5903 studys

N = 493.949

Follow-Up: 4.9y

Conclusion:

CRC risk is significantly higher in patients with baseline advanced SPs after 4.9 years of follow-up, with risk magnitudes similar to those described for AA, supporting the current recommendation for 3-year surveillance in patients with advanced SPs.

HYPERPLASTIC POLYPS

	Reference individuals	Hyperplastic polyps	Sessile serrated polyps
Proximal colon cancer			
Cases (n)	5040	501	40
HR (95% CI); p value*	1 (ref)	2.14 (1.90–2.42); p<0.0001	2.77 (1.84–4.18); p<0.0001
Distal colon cancer			
Cases (n)	4061	175	12
HR (95% CI); p value*	1 (ref)	0.81 (0.68–0.97); p=0.02	1.11 (0.57–2.18); p=0.75

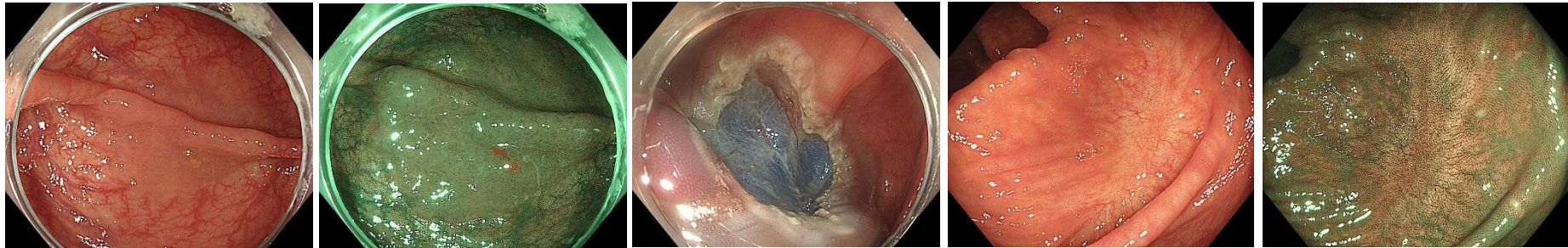
Retrospective Multicenter Study
Sweden
N = 178.377
Follow-Up: 6.6y

Conclusion:
we found a higher proportion of diagnosis of proximal colon cancer among patients with hyperplastic polyps (57%) and SSA/Ps (52%) than adenomas (30-46%), and that the increased cancer risk for hyperplastic polyps was restricted to the proximal colon (HR, 1.91).

Song et al; 2020

PIECEMEAL EMR

Unverändert bleibt die Empfehlung, nach Piecemeal-Re-sektion (meist ab einer Polypengrösse >2 cm) oder bei Unsicherheit hinsichtlich Vollständigkeit der Polypen-entfernung eine endoskopische Kontrolle der Resek-tionsstelle nach 3–6 Monaten vorzunehmen und, falls sich dabei kein Rezidiv zeigt, eine weitere nach 3 Jahren anzuschliessen.



- Risk of recurrence / residual tissue of 12 – 24%
- 75% found at 3 months, 90% at 6 months

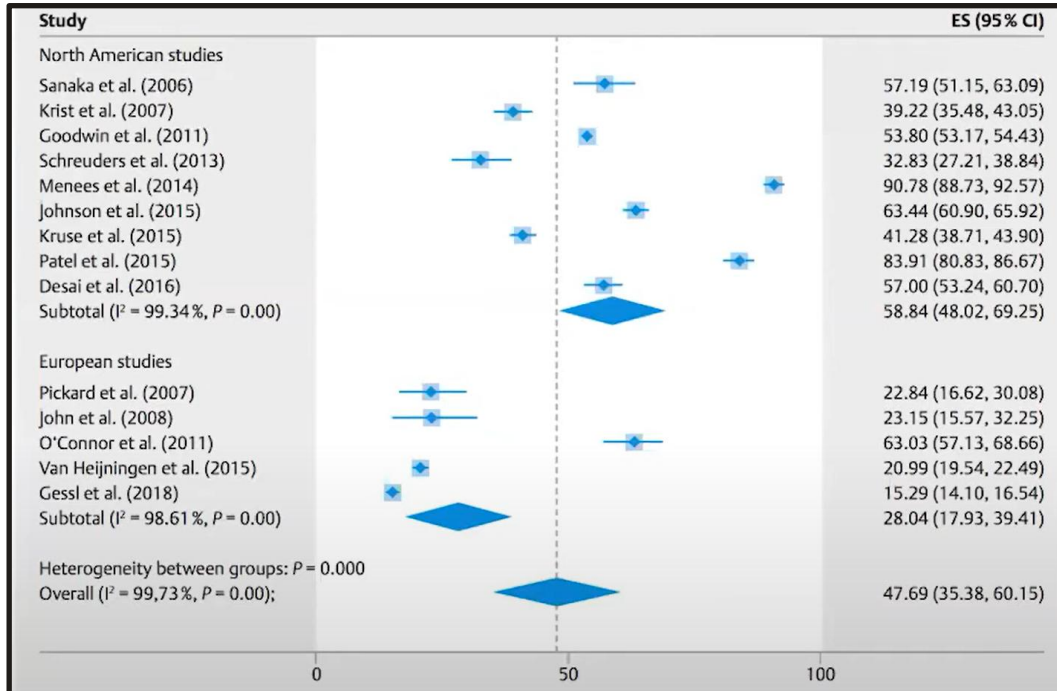


ESGE

Hassan et al.; Endoscopy 2020
Belderbos et al.; Endoscopy 2014

STICKING TO GUIDELINES ?

Influenced by Patients (and Gastroenterologists)



**Mean adherence:
48.8%**

**Low Risk Group:
US vs. Europe
44.7% vs. 24.4%**

**High Risk Group:
US vs. Europe
54.6% vs. 73.6%**

STICKING TO GUIDELINES ?

Influenced by Gastroenterologists

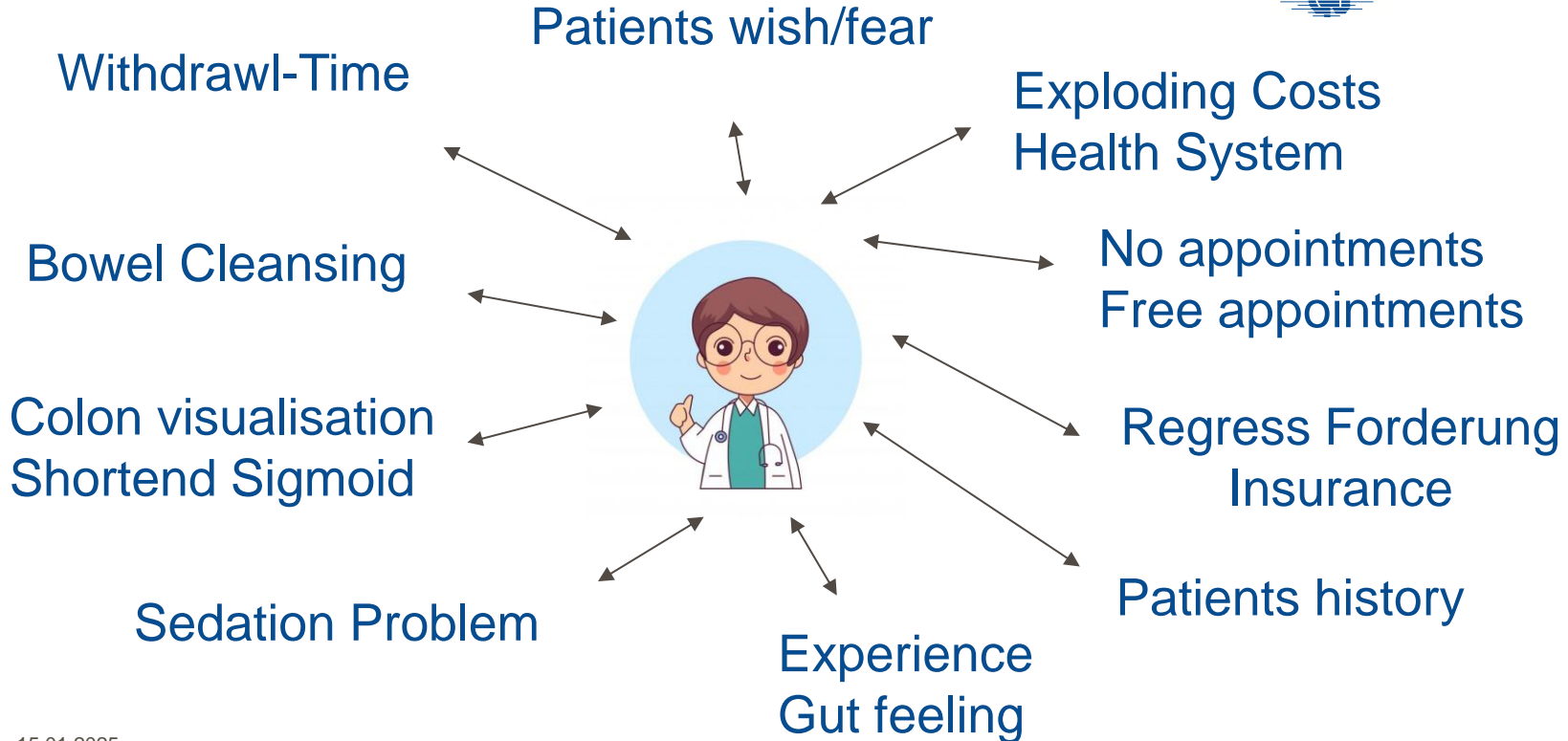
Korean Study

Clinical scenario	Recommendation in Korean guidelines, yr	Responses on follow-up surveillance intervals					
		6 mo	1 yr	3 yr	5 yr	10 yr	No repetition
6-mm Hyperplastic polyp	5*	1 (0.2)	33 (7.0)	124 (28.9)	210 (61.1)	9 (2.7)	1 (0.2)
6-mm TA	5 [†]	4 (0.7)	117 (26.9)	182 (48.6)	71 (23.5)	1 (0.3)	0
12-mm TA with HGD	3	163 (34.1)	168 (49.4)	44 (15.8)	2 (0.7)	0	0
12-mm TVA	3	99 (20.2)	191 (48.4)	84 (30.3)	3 (1.0)	0	0
Two 6-mm TAs	5 [†]	13 (2.2)	150 (31.8)	157 (47.3)	55 (18.3)	1 (0.4)	0
No polyps in a patient with a 12-mm TA 3 yr earlier	5*	2 (0.4)	18 (3.2)	159 (41.4)	196 (52.9)	3 (2.1)	0

Conclusion:

The present study reveals a remaining discrepancy between practitioner recommendations and current guidelines for postpolypectomy surveillance. Several factors were shown to be related to guideline adherence, suggesting a need for appropriate control and continuing education or training programs among particular groups of practitioners.

PHYSICAN - INFLUENCES

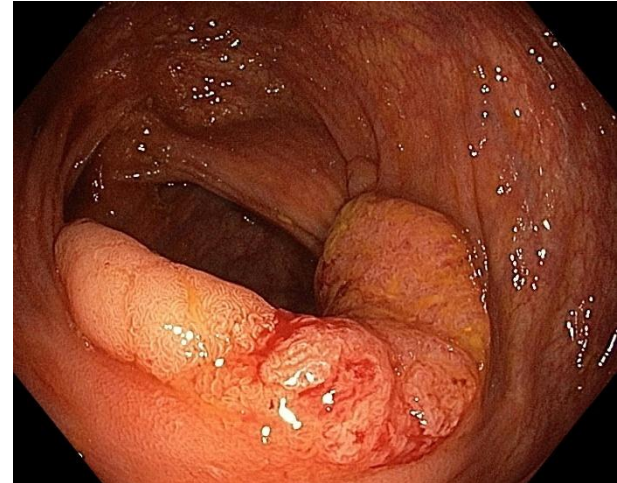
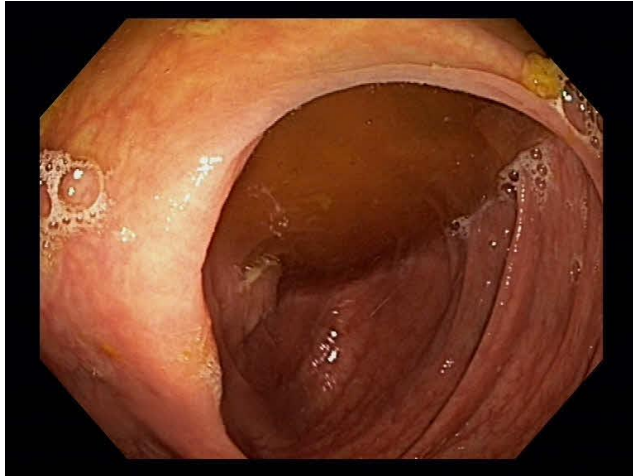


CASE REPORT 1

Vorsorgekoloskopie 2014

→
9 Jahre

Vorsorgekoloskopie 2023



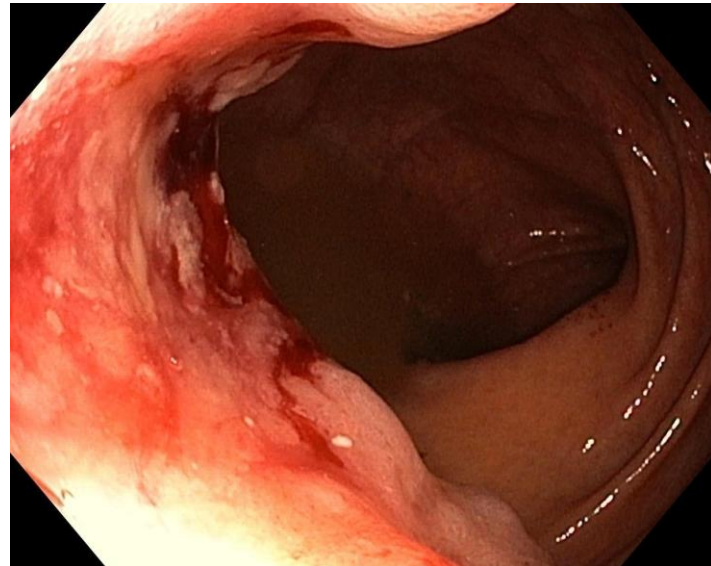
CASE REPORT 2

11/2021 breitbasiger Polyp im C. ascendens
Gleichzeitig Duodenalkarzinom



11/2021

16 Monate



03/2023

CASE REPORT 3

82jähriger Patient

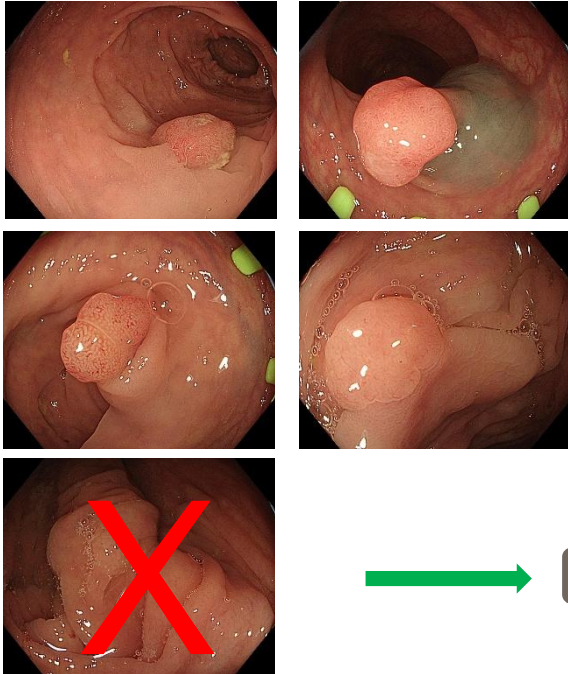
2012 Koloskopie bei Blutung unter Antikoagulation
Koloskopie: Nebenbefund Polyp im Rektum ca. 8mm –
Belassen auf Grund Antikoagulation

Re-Koloskopie in Vergessenheit geraten. Neuer Hausarzt 2024.
Empfehlung zur Koloskopie

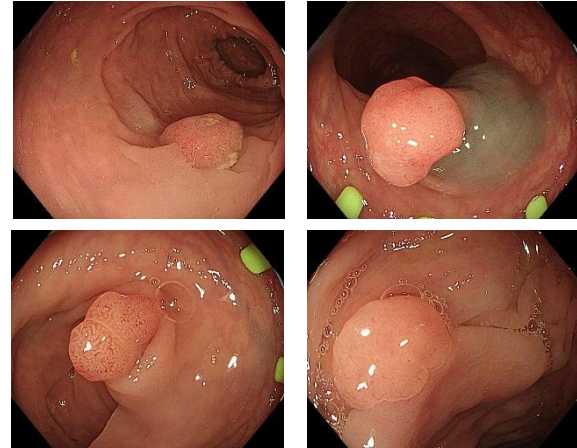
2024 Koloskopie: Polyp 10mm im Rektum. EMR: Tub. Adenom mit LGIEN

CASE REPORT 4

Vorsorgekoloskopie 2024 – 5 Polypen



→ 3y



↓ 10y

BACK TO THE TITLE / QUESTION

SCREENING RECOMMENDATIONS 2022 - EARLY AND SAFE ENOUGH?

- As far as we know: YES
- Recommendations – possibility for individualisation
- Quality of index Colonoscopy is increasing
- More Data / Trials / Studies to come

LOW-RISK

Adenomas:

- Size < 1 cm
- Low-grade-Dysplasia
- < 5 Adenomas

Serrated Lesions:

- SSL < 1 cm without Dysplasia

10y

HIGH-RISK

Adenomas:

- Size > 1cm
- High grade Dysplasia
- 5 Adenomas

Serrated Lesions:

- SSL > 1cm or with dysplasia
- TSA

3y

FUTURE ASPECTS

EPOS Trials in progress (2029)

- Follow-Up different Adenoma Subtypes different Surveillance-Strategies

More Subgroups of Polyp Size (< 20mm)

- Wieszczy et al, Gastroenterology 2019

Longer Intervals after Piecemeal-EMR

Identify Genetic Factors

Identify and take in aspect Lifestyle / Co-Diseases



GastroZentrum

HIRSLANDEN 
KLINIK HIRSLANDEN

HERZLICHEN DANK

GASTROZENTRUM HIRSLANDEN

HIRSLANDEN AG
KLINIK HIRSLANDEN
WITELIKERSTRASSE 40
CH-8032 ZÜRICH

SWISS RECOMEDNATIONS 19.01.2022

Spezielle Situationen

Piecemeal-Resektion grosser sessiler Polyp (meistens >2 cm): lokale Kontrolle nach 3–6 Monaten, wenn (diese) unauffällig, Koloskopie nach 3 Jahren.

Diese Empfehlungen gelten nicht bei (Verdacht auf) hereditärem kolorektalem Karzinom, serratiertem Polypose-Syndrom (SPS), positiver Familienanamnese für das kolorektale Karzinom.

Definition SPS (WHO 2019): – ≥ 5 SP proximal des Rektums, alle ≥ 5 mm, davon mindestens zwei ≥ 10 mm

oder

– >20 SP jeglicher Grösse im ganzen Kolorektum, davon ≥ 5 proximal des Rektums (kumulative Anzahl SP aller Koloskopien)