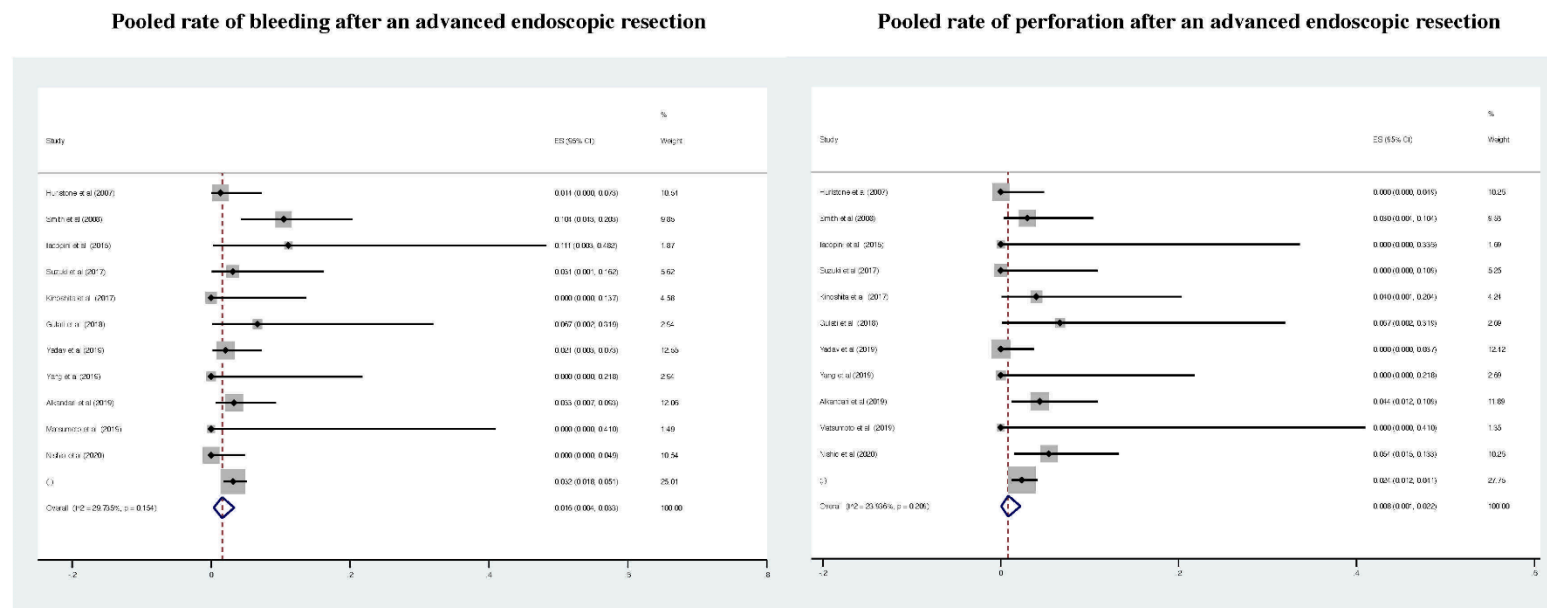


## Supplementary material

**SUPPLEMENTARY MATERIALS****Advanced Endoscopic Resection For Colorectal Dysplasia In Inflammatory Bowel Diseases: A Meta-Analysis**

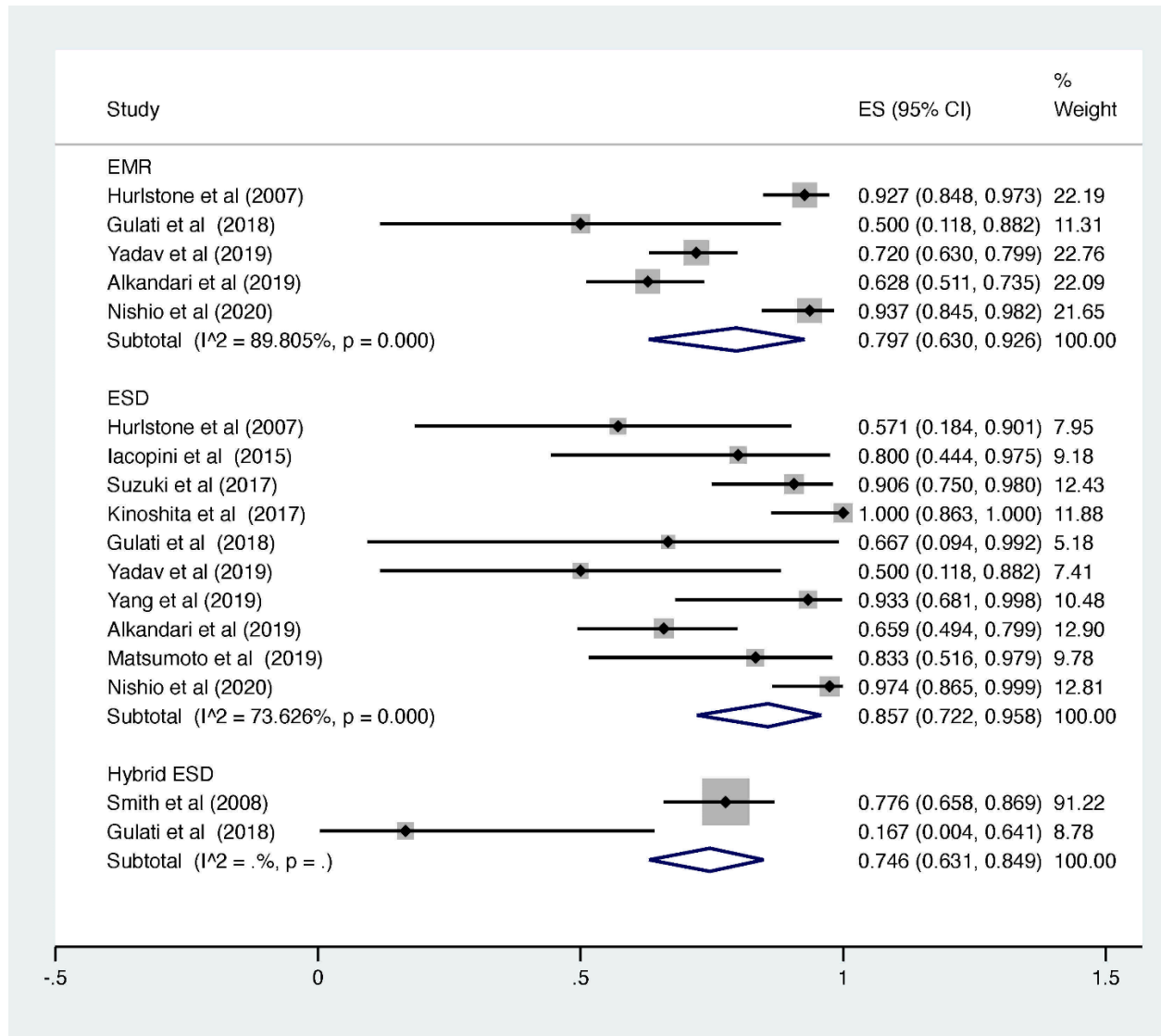
Sonmoon Mohapatra, MD<sup>1,2</sup>, Kesavan Sankaramangalam, MD<sup>1</sup>, Chawin Lopimpisuth, MD<sup>2</sup>, Oluwatoba Moninuola, MD<sup>1</sup>, Malorie Simons, MD<sup>2</sup>, Julie Nanavati, MLS, MA<sup>3</sup>, Leah Jager, PhD<sup>4</sup>, Debra Goldstein, MD<sup>1</sup>, Arkady Broder, MD<sup>1</sup>, Venkata Akshintala, MD<sup>2</sup>, Reezwana Chowdhury, MD<sup>2</sup>, Alyssa Parian, MD<sup>2</sup>, Mark G Lazarev, MD<sup>2</sup>, Saowanee Ngamruengphong, MD<sup>2Δ</sup>

## Supplementary material



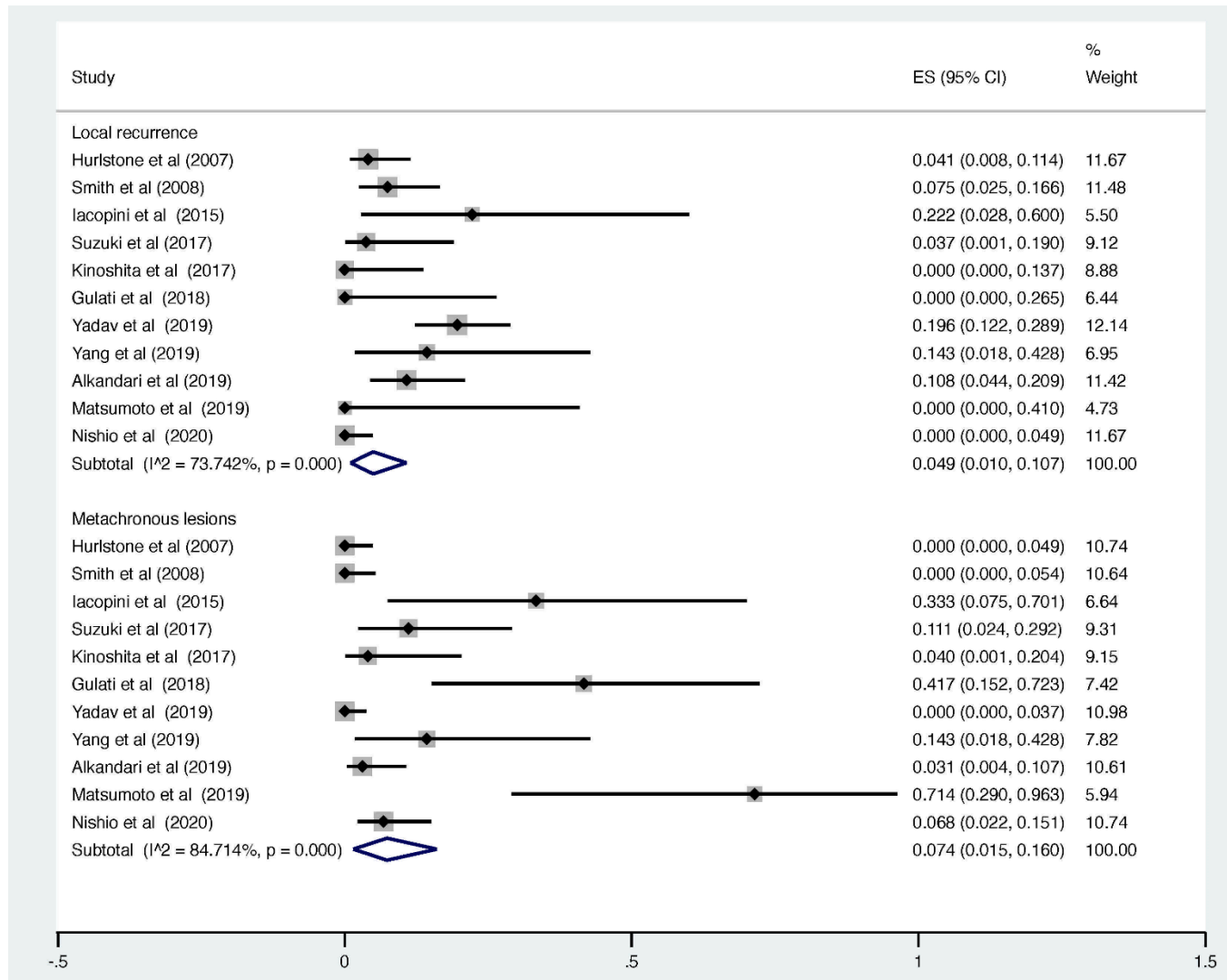
**Supplementary Figure 1:** Forest plot, pooled rate of bleeding and perforation after endoscopic resection for IBD-associated dysplasia

## Supplementary material



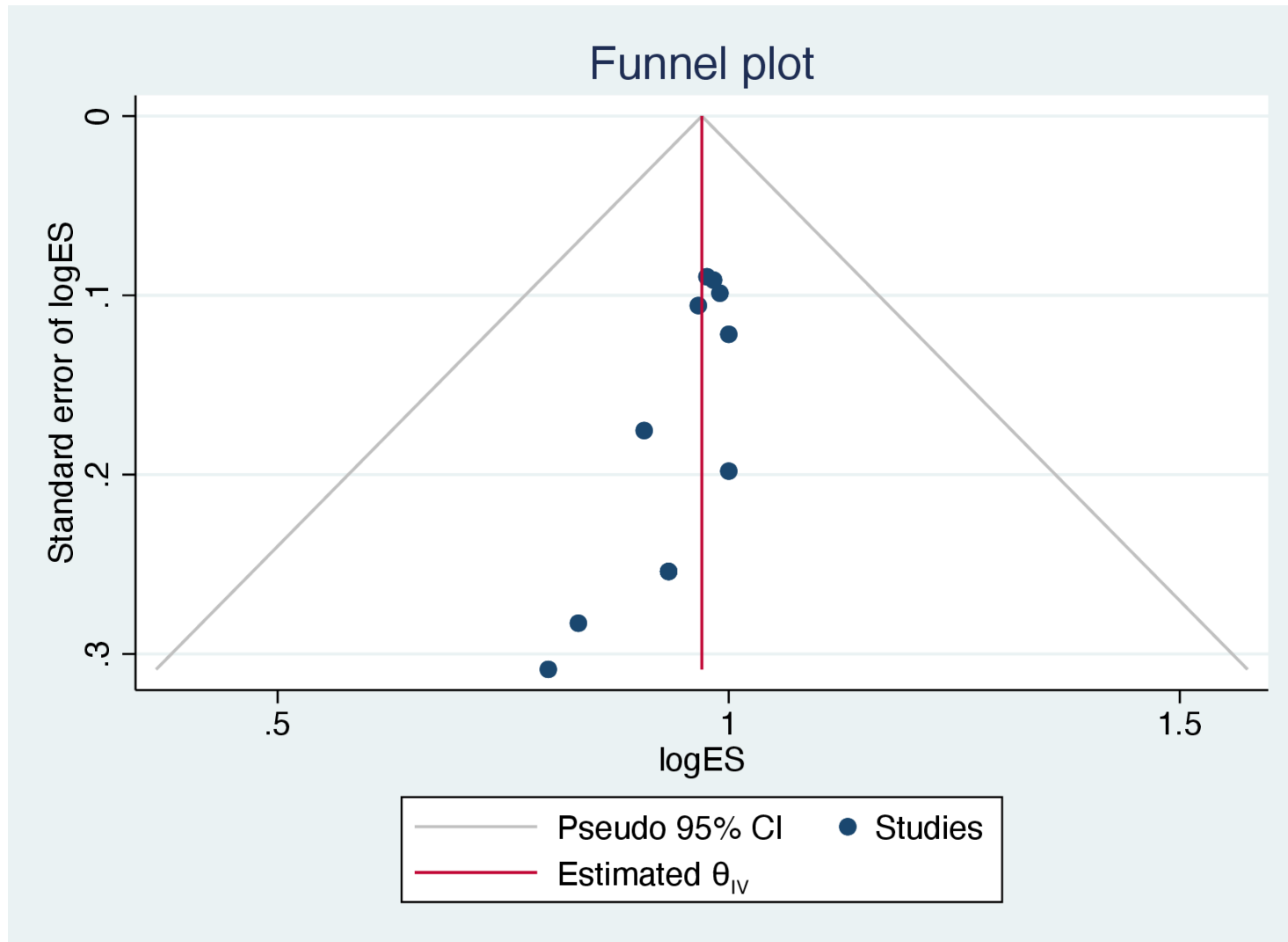
**Supplementary Figure 2:** Forest plot, pooled rate of en-bloc resection of ESD, EMR and hybrid ESD

## Supplementary material



**Supplementary Figure 3:** Forest plot, pooled rate of local recurrence and metachronous dysplasia after endoscopic resection during surveillance period

## Supplementary material



Supplementary Figure 4: Publication bias, Funnel plot

## Supplementary material

**Appendix-A: Literature search strategy****Medline (PubMed)**

"Endoscopic Mucosal Resection"[Mesh] OR (endoscopic resection\*[tiab] OR endoscopic mucosal resection\*[tiab] OR Endoscopic Submucosal Dissection\*[tiab] OR endoscopic therap\*[tiab] OR endoscopic dissection\*[tiab] OR polypectomy\*[tiab])  
AND

"Inflammatory Bowel Diseases"[Mesh] OR inflammatory bowel disease\*[tiab] OR colitis[tiab] OR crohn\*[tiab]

**Embase (Embase.com)**

(endoscopic mucosal resection'/exp) OR (“endoscopic resection\*” OR “endoscopic mucosal resection\*” OR “Endoscopic Submucosal Dissection\*” OR “endoscopic therap\*” OR “endoscopic dissection\*” OR polypectom\*):ti,ab

AND

(inflammatory bowel disease'/exp) OR (“inflammatory bowel disease\*” OR colitis OR crohn\*):ti,ab

**Web of Science**

TS=(“endoscopic resection\*” OR “endoscopic mucosal resection\*” OR “Endoscopic Submucosal Dissection\*” OR “endoscopic therap\*” OR “endoscopic dissection\*” OR polypectom\*)

AND

TS=(“inflammatory bowel disease\*” OR colitis OR crohn\*)

**Cochrane Library**

[mh "Endoscopic Mucosal Resection"] OR (“endoscopic resection\*” OR “endoscopic mucosal resection\*” OR “Endoscopic Submucosal Dissection\*” OR “endoscopic therap\*” OR “endoscopic dissection\*” OR polypectomy)

AND

[mh "Inflammatory Bowel Diseases"] OR “inflammatory bowel disease\*” OR colitis OR crohn\*

## Supplementary material

Supplementary Table 1: Bias assessment in individual studies

Author, year	Representativeness of the exposed cohort	Ascertainment of exposure	Demonstration that outcome of interest was not present at start of study	Assessment of outcome	Was follow-up long enough for outcomes to occur	Adequacy of follow up of cohorts
Hurlstone et al, 2007	Yes	Yes	Yes	Yes	Yes	Yes
Smith et al, 2008	Yes	Yes	Yes	Yes	Yes	Yes
Iacopini et al, 2015	Yes	Yes	Yes	Yes	Yes	Yes
Suzuki et al, 2017	Yes	Yes	Yes	Yes	Yes	Yes
Kinoshita et al, 2017	Yes	Yes	Yes	Yes	Yes	Yes
Gulati et al, 2018	Yes	Yes	Yes	Yes	Yes	No
Yadav et al, 2019	Yes	Yes	Yes	Yes	Yes	Yes
Yang et al, 2019	Yes	Yes	Yes	Yes	Yes	Yes
Alkandari et al, 2019	Yes	Yes	Yes	Yes	Yes	No
Matsumoto et al, 2019	Yes	Yes	Yes	Yes	Yes	Yes
Nishio et al, 2020	Yes	Yes	Yes	Yes	Yes	Yes

## Supplementary material

Supplementary Table 2: Lesion characteristics in the included studies

Author (year)	Type of lesion (n)		Median size of the lesions (mm)	Characteristics of lesions with visible dysplasia (n)									
	Polypoid	Non polypoid		(Paris classification)									
				Ip	Is	IIa	IIb	IIc	Is+IIa	IIa+IIb	IIa+IIc	LST-G	LST-NG
Hurlstone et al (2007)*	0	89	21.5 (2-48)	-		82			-	-	-	4	3
Smith et al (2008)*	24	43	22.5 (8-62)	-	24	13			-	-	-	19	11
Iacopini et al (2015)	0	10	15 (10-20)	-	-	-	-	-	-	-	-	5	5
Suzuki et al (2017)	2	30	33 (12-73)	-	2	3	1		4	8	1	8	5
Kinoshita et al (2017)	5	20	21.6 ± 12.8 (mean)	-	5	14	5	1	-	-	-	-	-
Gulati et al (2018)	0	15	40 (20-90)	-		8	5		2	-	-	-	-
Yadav et al (2019)	76	48	15 (10-60)	7	69	45	2	1	-	-	-	-	-
Yang et al (2019)	1	14	23 (12-48)	-	1	12			2	-	-	-	-
Alkandari et al (2019)	40	79	27 (mean)	NA									
Matsumoto et al (2019)	2	10	15 (8-35)	NA									
Nishio et al (2020)	47	55	12 ± 9.6 (mean)	5	42	55							

NA = Not available, \*Calculated mean size



## Supplementary material

Supplementary Table 3. Outcomes of the endoscopic resection technique in the included studies

Study (year)	Number of lesions (n)	Endoscopic resection techniques (%)			En bloc (%)	Complete endoscopic resection (%)	Adverse events				Number of patients requiring surgery	Reasons for surgery (number of patients)
		EMR	Hybrid ESD	ESD			Early bleeding	Late bleeding	Perforation	Post polypectomy syndrome		
Hurlstone et al 2007*	89	92.1	0	7.8	89.8	96.6	0	1	0	0	3	Non lifting (3)
Smith et al 2008	67	0	100	0	78	100	5	2	2	2	0	-
Iacopini et al 2015	10	0	0	100	80	80	0	1	0	0	1	Invasive cancer T1 (SM1) (1)
Suzuki et al 2017	32	0	0	100	90	90.6	0	1	0	0	4	Invasive cancer T1 (2), patient preference (2)
Kinoshita et al 2017	25	0	0	100	100	100	0	0	1	0	5	Invasive cancer (5)
Gulati et al 2018	15	40	40	20	40	93.3	0	1	1	0	0	-
Yadav et al 2019	124	95	0	5	71	97.5	0	2	0	0	11	Invasive cancer (3), Incomplete resection (3), medically refractory to

## Supplementary material

													therapy (3), HGD (2)
Yang et al 2019	15	0	0	100	93	93.3	0	0	0	0	0	1	Invasive cancer (1)
Alkandari et al 2019	119	65	14.3	20.2	63.8	98.3	3	0	4	0	0	8	Perforation (1), invasive cancer (5), incomplete resection (2)
Matsumoto et al 2019	12	0	0	100	83	83.3	0	0	0	0	0	1	Incomplete resection (1)
Nishio et al 2020	102	62		38	95	99	0	0	4	0	0	8	Invasive cancer (1), incomplete resection/non R0 resection (4), HGD (3)

\*46 lesions which were resected with simple polypectomy technique were excluded from the final analysis. NA = Not available.