Supplementary Materials

Article Title: Prevalence of incidental colorectal cancer and polyps in autopsies of different populations: a systematic review with meta-regression analysis

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Box 1 Search strategy

1. Colorectal Neoplasms/
2. Colon/pa [Pathology]
3. Rectum/pa [Pathology]
4. Colonic Diseases/pa [Pathology]
5. Rectal Diseases/pa [Pathology]
6. ((Colo* or rect* or colorect*) adj3 (neoplasm* or neoplasia* or tumour* or tumor* or cancer* or carcinoma* or adenocarcinoma* or malignan* or pre-malignan* or premalignan* or adenoma* or polyp*)).tw.
7. Autopsy/
8. (autops* or postmortem* or post-mortem* or post mortem*).tw.
9. 1 or 2 or 3 or 4 or 5 or 6
10. 7 or 8
11. 9 and 10

Box 2 Items for quality assessment

External Validity

1. Autopsy service excluded participants with premortem CRC and/or polyps. (Y/N)
2. Autopsy service did not deliberately restrict study participants in any way (eg, age, sex) except for previous history of CRC and/or polyps. (Y/N)
3. Some form of random selection was used or a census (eg, consecutive participants) to select the participants. (Y/N)
4. Non-availability of data was < 20% among the selected participants. (Y/N)

Internal Validity

5. Data collected directly from the histopathology (not autopsy notes). (Y/N)
6. An acceptable case definition was used for polyps and/or iCRC (must have stated criteria). (Y/N)
7. Polyps and/or iCRC detection method was reliable and valid (ie, the whole large bowel was examined, peer review of the histological diagnosis). (Y/N)
8. Same mode of lower gastrointestinal tract examination for all participants in the study. (Y/N)
9. Numerator and denominator match the reported results. (Y/N)

Table 1 Potential predictors of colorectal adenomatous and hyperplastic polyps: sensitivity analysis excluding studies from after 1990s

Predictors	Adenomatous polyps[a]		Hyperplastic polyps[b]	
	POR (95% CI)	*P* value	POR (95% CI)	*P* value
Period performing autopsies				
Before 1975	1		1	
1975 – 1985	0.86 (0.33 to 2.20)	0.745	0.67 (0.09 to 4.93)	0.683
After 1985	0.34 (0.11 to 1.05)	0.061	0.17 (0.02 to 1.73)	0.130
Test for trend		0.078		0.136
Predominant ethnicity				
White	1		1	
Others	0.26 (0.11 to 0.63)	0.003	0.25 (0.03 to 2.05)	0.191
Men-to-women ratio				
≤1.44	1		1	
> 1.44	1.29 (0.58 to 2.86)	0.529	1.56 (0.35 to 6.97)	0.553
Age group				
<30	1		1	
30 – 49	3.24 (2.34 to 4.49)	<0.001	1.83 (1.07 to 3.12)	0.027
50 – 69	6.45 (4.86 to 8.55)	<0.001	2.69 (1.89 to 3.85)	<0.001
>69	10.09 (7.61 to 13.38)	<0.001	2.83 (1.98 to 4.06)	<0.001
Test for trend		<0.001		<0.001
Sample size				
Large (≥500)	1		1	
Small (<500)	1.25 (0.57 to 2.74)	0.576	3.02 (0.37 to 24.49)	0.293
Study quality				
High	1		1	
Moderate	0.80 (0.30 to 2.12)	0.649	0.71 (0.09 to 5.75)	0.744
Low	0.14 (0.05 to 0.41)	<0.001	0.11 (0.01 to 1.18)	0.067
Test for trend		<0.001		0.079

[a.] 93 datapoints from 28 studies; [b.] 55 datapoints from 18 studies. POR: prevalence odds ratio.

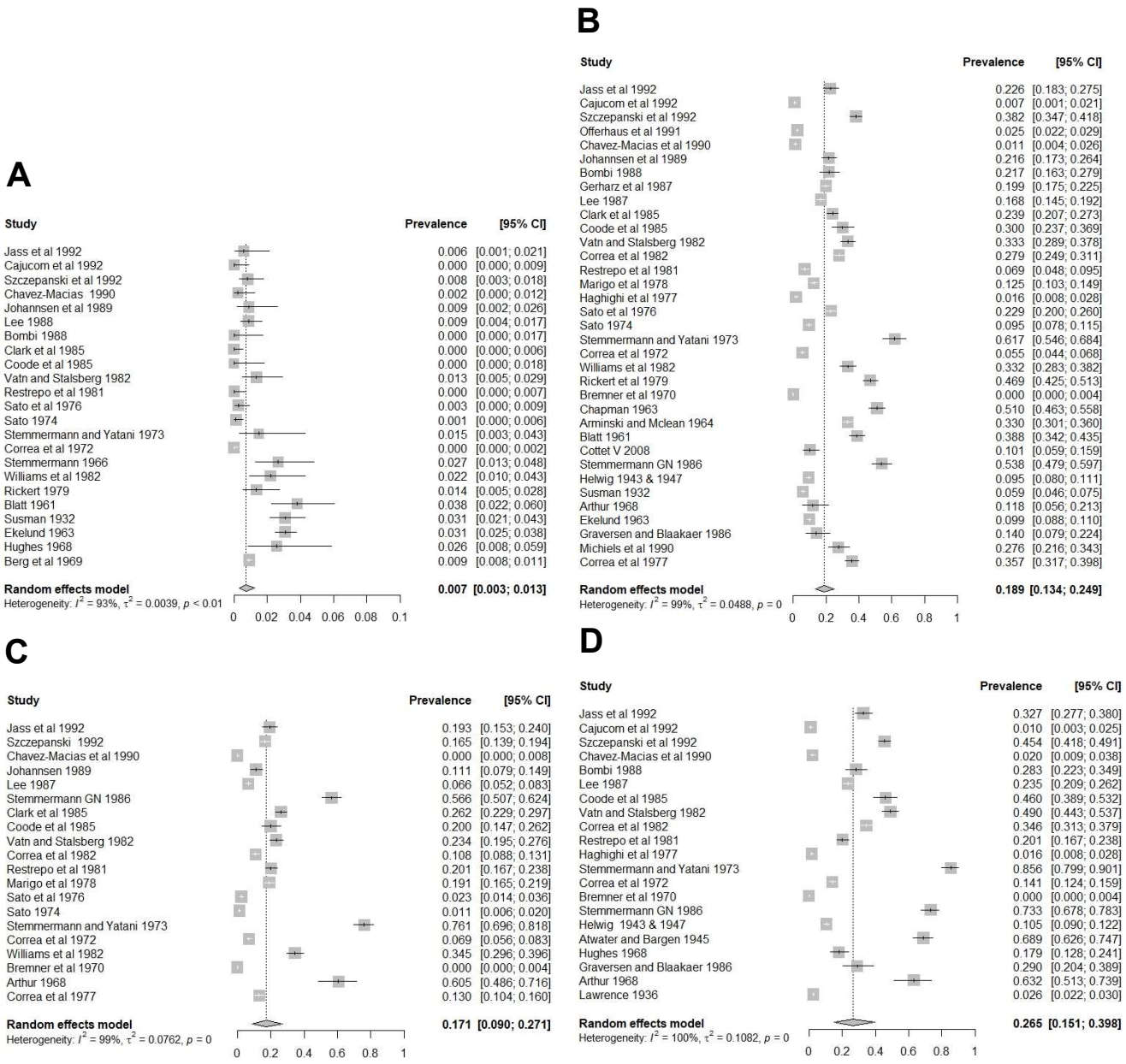

Fig. 1 Prevalence of (A) iCRC, (B) adenomatous polyps, (C) hyperplastic polyps, and (D) all polyps combined: sensitivity analysis excluding studies from after 1990s (iCRC plus polyps was not included as all studies reported the prevalence of iCRC plus polyps were conducted before 1990s)

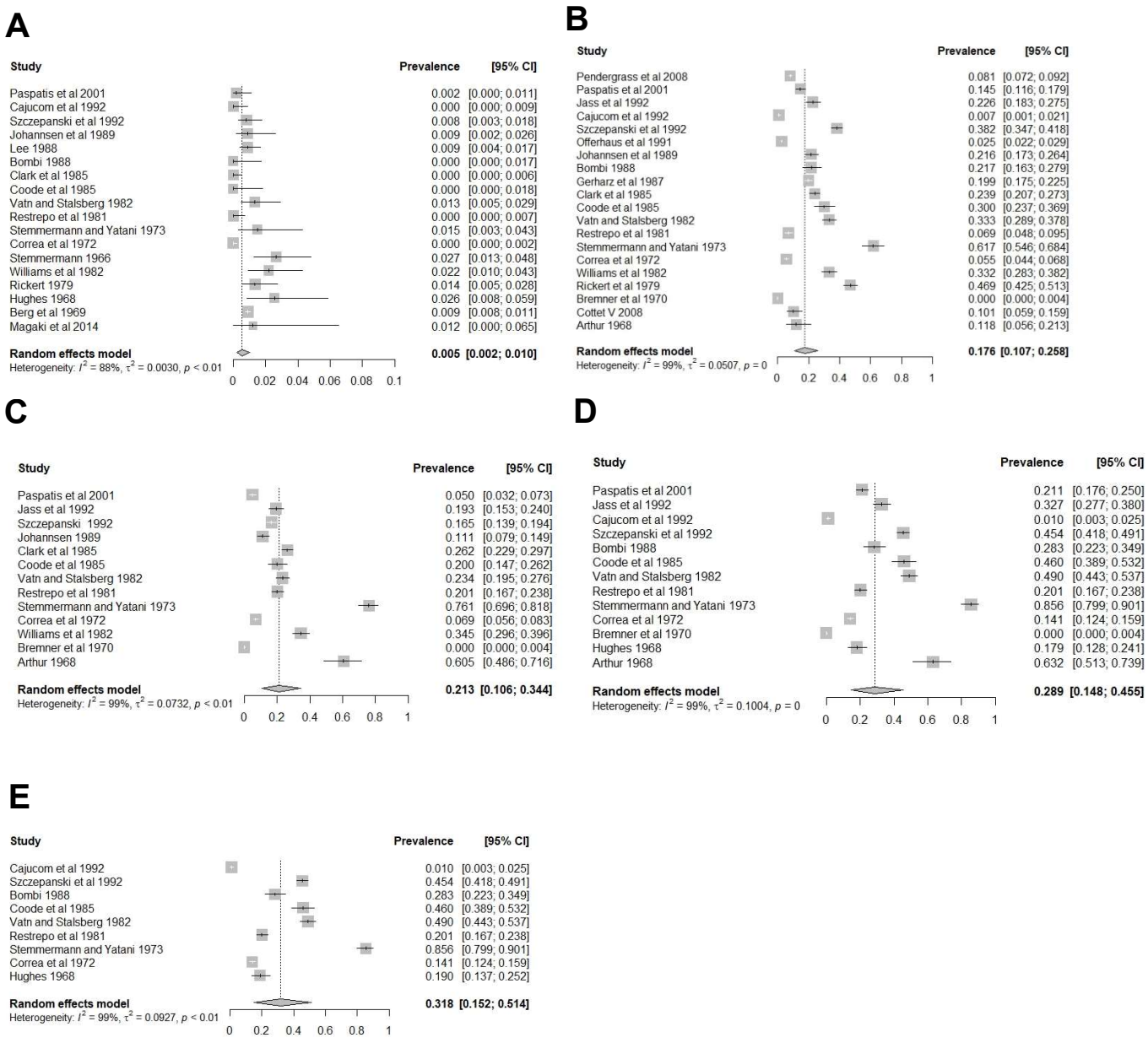

Fig. 2 Prevalence of (A) iCRC, (B) adenomatous polyps, (C) hyperplastic polyps, (D) all polyps combined, and (E) iCRC plus polyps: sensitivity analysis excluding studies in which it was unclear whether all CRC or polyps found were "incidental"

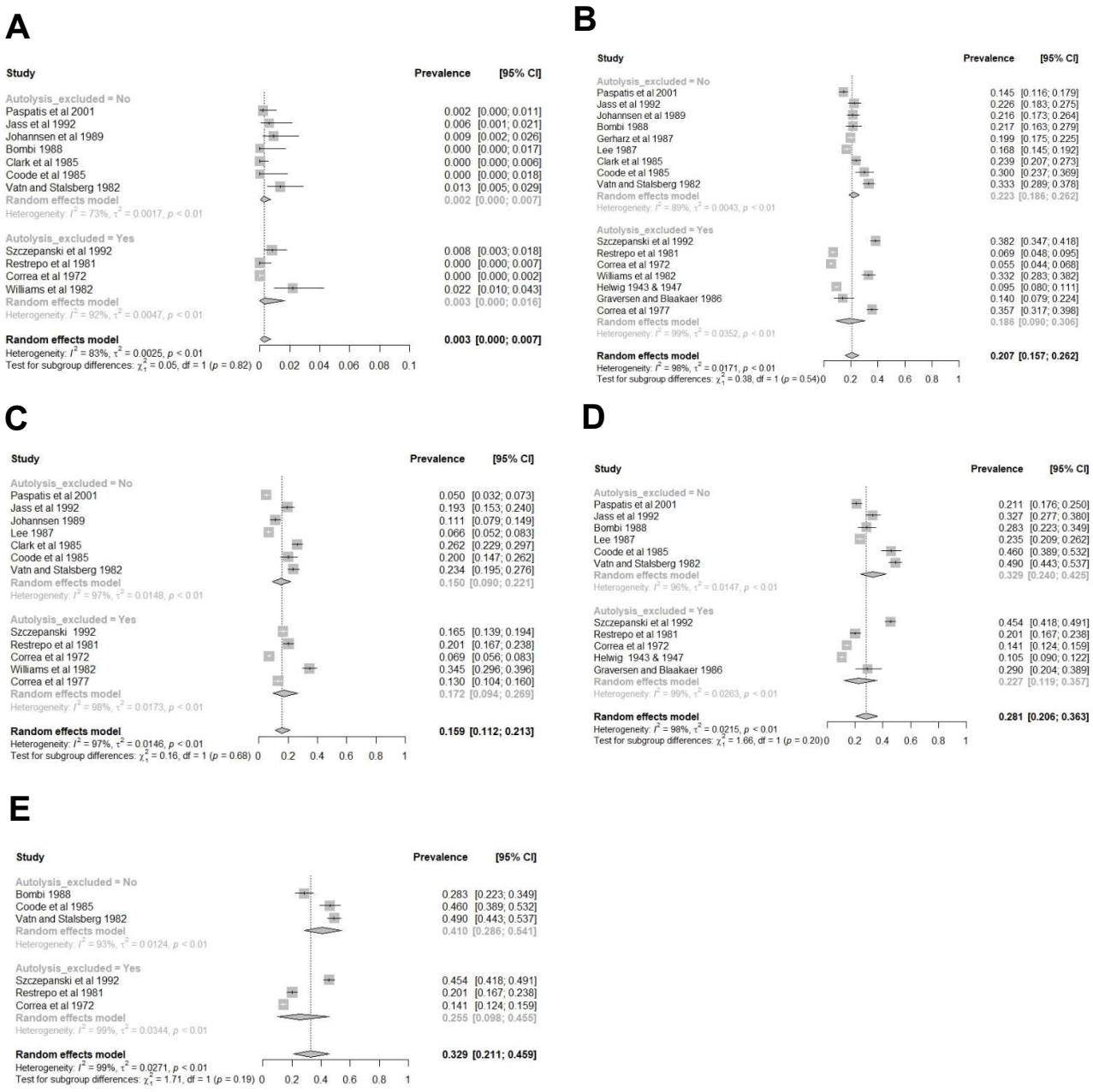

Fig. 3 Prevalence of (A) iCRC, (B) adenomatous polyps, (C) hyperplastic polyps, (D) all polyps combined, and (E) iCRC plus polyps: subgroup analysis according to whether the specimens with autolysis were excluded

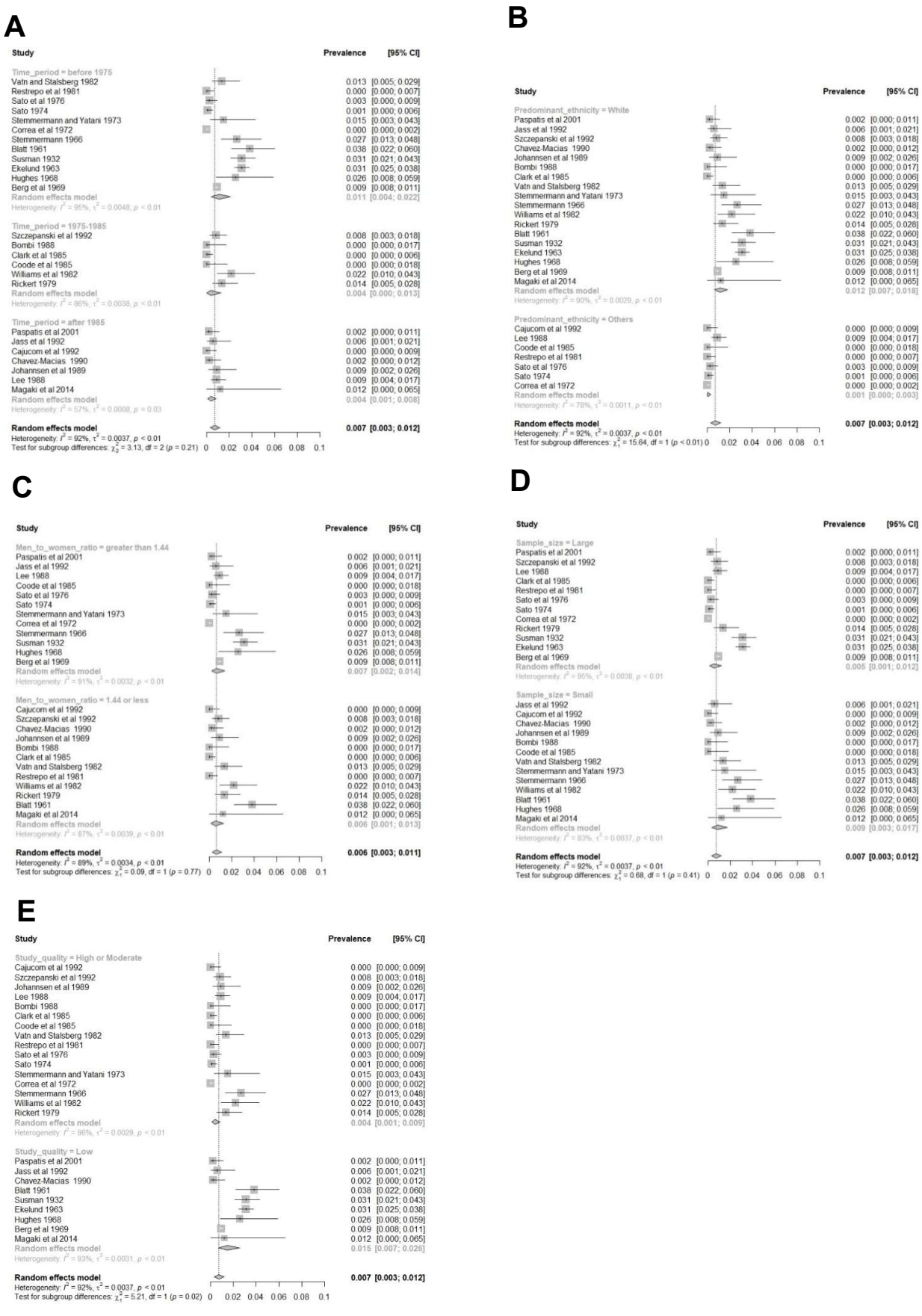

Fig. 4 Subgroup analysis of the prevalence of iCRC according to (A) periods of autopsies, (B) predominant ethnicity of the countries/regions where the autopsies were conducted, (C) men-to-women ratio, (D) sample size, and (E) study quality. One study without men-to-women ratio was excluded in (C)

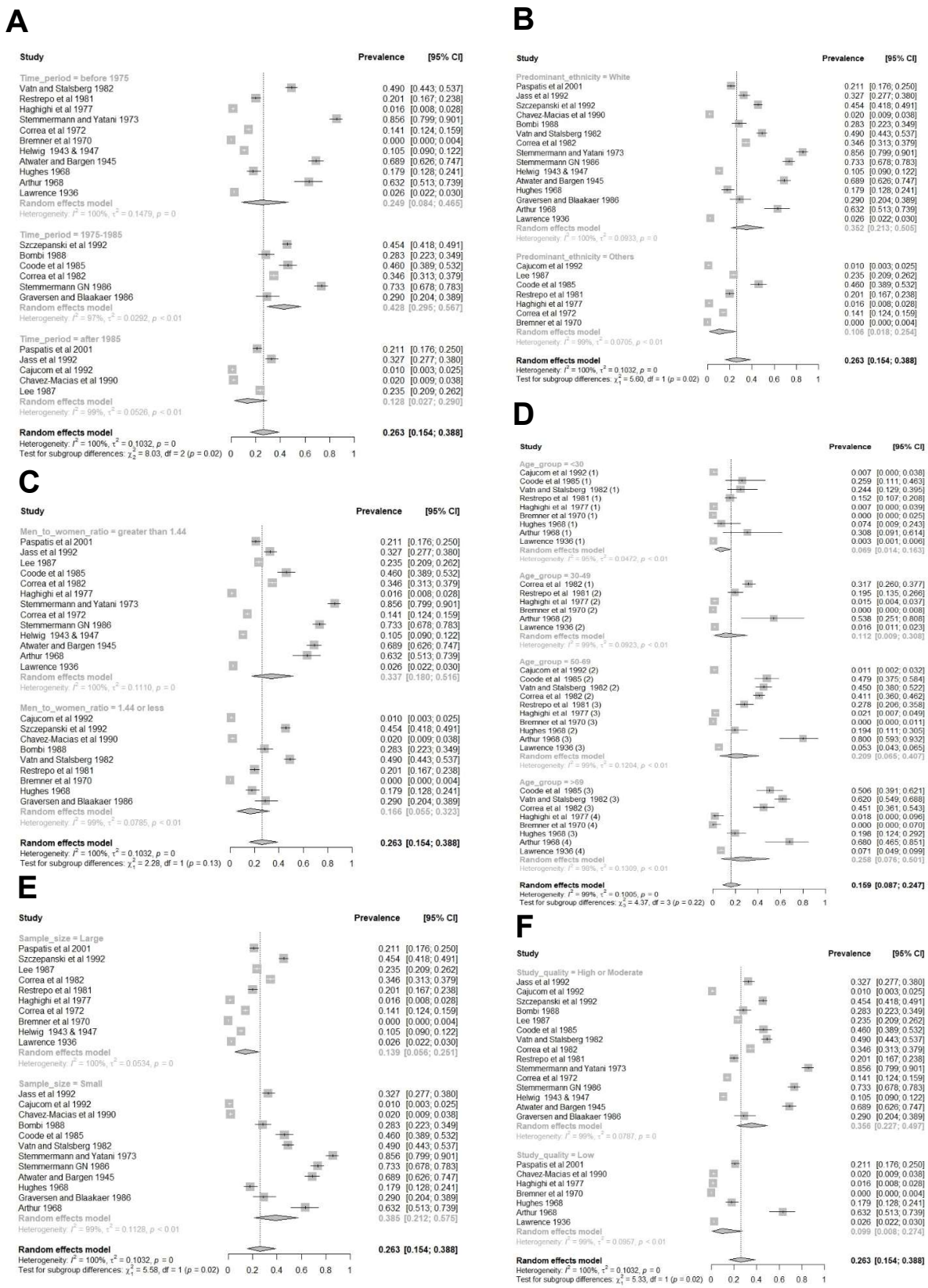

Fig. 5 Subgroup analysis of the prevalence of all polyps combined according to (A) periods of autopsies, (B) predominant ethnicity of the countries/regions where the autopsies were conducted, (C) men-to-women ratio, (D) age groups, (E) sample size and (F) study quality. Only 10 studies with age reported were included in (D)

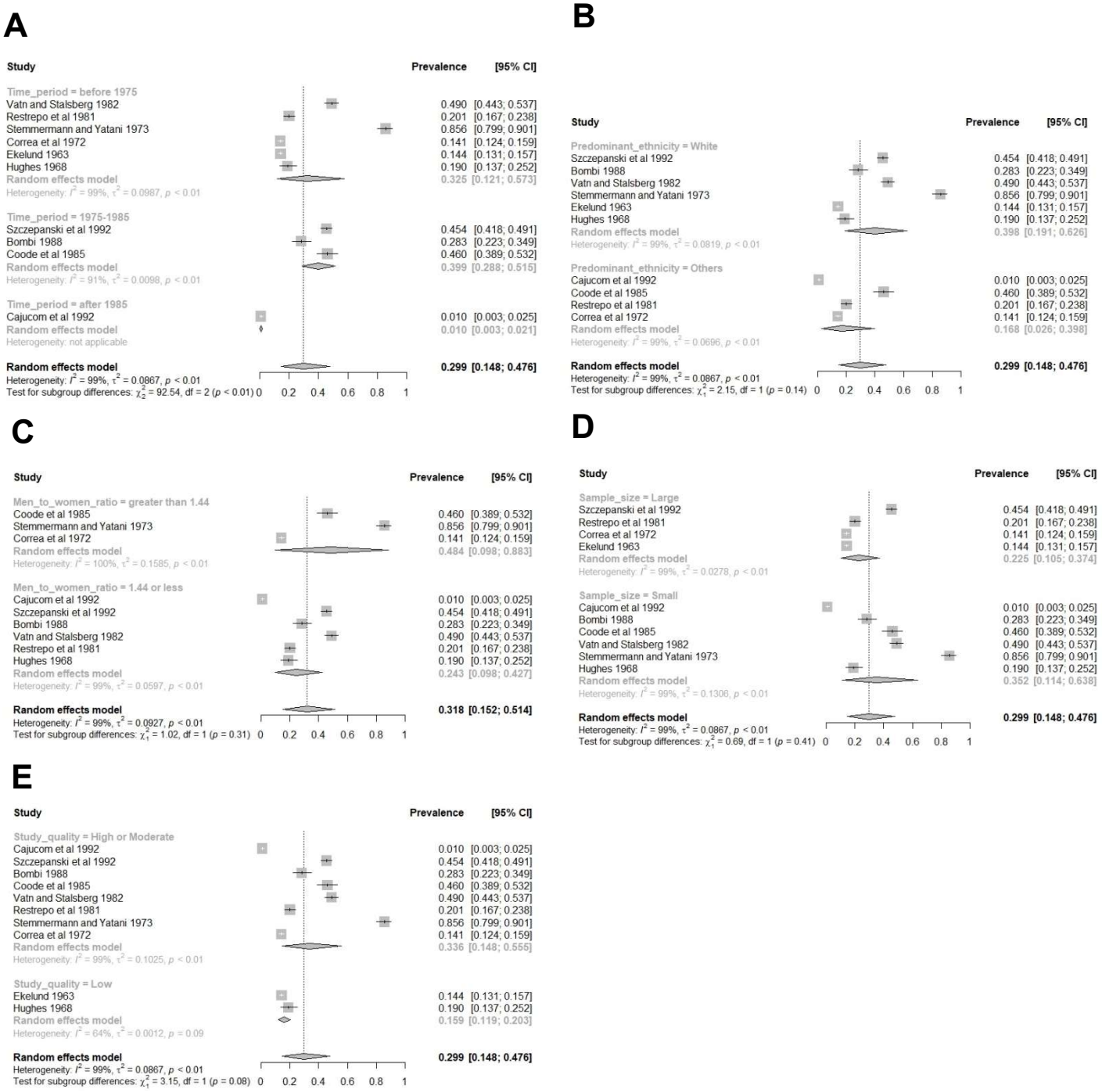

Fig. 6 Subgroup analysis of the prevalence of iCRC plus polyps according to (A) periods of autopsies, (B) predominant ethnicity of the countries/regions where the autopsies were conducted, (C) men-to-women ratio, (D) sample size, and (E) study quality. One study without men-to-women ratio was excluded in (C)