Supplementary material for:

Patients with Gastric Polyps need Colonoscopy Screening at Younger Age: A Large Prospective Cross-Sectional Study in China

Methods

Sample size estimation

To predict an appropriate sample size, a pilot study was conducted that included 30 subjects with gastric polyps and another 30 age- and sex-matched subjects without gastric polyps. Eight patients with colorectal polyps were detected in the gastric polyp group, compared with six in the control group. Therefore, we used a prevalence of 0.27 for the gastric polyp group and 0.20 for the control group to calculate sample size. Considering that a maximum of 10% of patients might fail to undergo colonoscopy within six months after EGD, we needed at least 724 subjects per group to achieve at least 85% power at 5% significance. Power Analysis and Sample Size software (PASS, LLC, Kaysville, Utah, USA) was used to calculate the sample size.

Supplemental Table 1: Characteristics of 12 patients with colorectal cancers.

Case no./enrollment year	Age/sex	BMI	Family	Esophagogastr	oduodenoscopy	Characteristic of polyps in colonoscopy and TNM staging				Treatment
		(kg/m2)								
			of CRC							
			cke	Indication	Pathology	Size	Location	Pathology	TNM staging	_
Group with gastric polyps										
1/2012	65/female	21.4	No	Epigastric pain	FGP	4.0cm	Descending	Adenocarcinoma	Stage I	Surgery
							colon		T2N0M0	
2/2012	36/female	21.4	No	Epigastric pain	FGP	1.5cm	Descending	Adenocarcinoma	Stage I	Endoscopically
							colon		T1N0M0	removed
3/2012	65/male	22.3	No	Heartburn	FGP	0.8cm	Rectum	Intramucosal	Stage I	Endoscopically
								adenocarcinoma	TisN0M0	removed
4/2013	63/female	21.2	Yes	Screening	FGP	0.8cm	Rectum	Adenocarcinoma	Stage I	Endoscopically
									T1N0M0	removed
5/2013	57/male	22.5	No	Epigastric pain	FGP	4.0cm	Sigmoid colon	Adenocarcinoma	Stage I	Endoscopically
									T1N0M0	removed
6/2013	68/male	18.1	No	Epigastric pain	Hyperplastic	1.5cm	Sigmoid colon	Adenocarcinoma	Stage 0	Endoscopically
					polyp			in situ	TisN0M0	removed
7/2013	68/female	24.4	No	Screening	Hyperplastic	2.0cm	Sigmoid colon	Intramucosal	Stage 0	Endoscopically
					polyp			adenocarcinoma	TisN0M0	removed

8/2013	51/male	23.6	No	Epigastric pain	FGP	Surrounding	Rectum-sigmoid	Adenocarcinoma	Stage I	Surgery
						the lumen	junction		T2N0M0	
9/2013	66/female	25.7	No	Screening	FGP	1.5cm	Sigmoid colon	Adenocarcinoma	Stage IV	Palliative treatment
									T2NxM1 [#]	
10/2014	44/female	27.5	No	Screening	FGP	0.4cm	Transverse	Adenocarcinoma	Stage I	Surgery
							colon		T2N0M0	
Group without gastric polyps	3									
12/2012	70/male	15.2	No	Melena	Duodenal	0.8cm	Sigmoid colon	Adenocarcinoma	Stage I	Endoscopically
					ulcer				T1N0M0	removed
13/2012	64/male	24.8	No	Screening	Chronic	2.0cm	Rectum	Adenocarcinoma	Stage I	Endoscopically
					gastritis				T1N0M0	removed

BMI-body mass index; CRC-colorectal cancer; FGP-fundic gland polys

TNM staging: T-primary tumor, Tis-carcinoma in situ, intraepithelial or invasion of lamina propria, T1-tumor invades submucosa, T2-tumor invades muscularis propria; N- regional lymph nodes, Nx-regional lymph nodes cannot be assessed, N0-no regional lymph node metastasis; M- distant metastasis, M1-distant metastasis (#liver metastasis in case no. 9).

Supplemental Figure 1. Odds Ratio for detection of colorectal adenomas in pre-specified subgroups.

*the unit for body mass index is kg/m^2 , #the unit for blood glucose and lipid level is mmol/L.

NSAIDS-non-steroidal anti-inflammatory drugs; LDL-low density lipoprotein; HDL-high density lipoprotein.

	Patients	Polyps	Gastric Polyps		Odds Ratio (95% CI)	P Valu
			l adenomas(%)			
Overall	1546	133(17.1%)	229(29.7%)	⊢	1.93 (1.55,2.39)	
Sex						0.37
Male	591	74(24.5%)	109(37.7%)	⊢ ■──	1.87 (1.31,2.66)	
Female	955	59(12.4%)	120(24.9%)	⊢	2.34 (1.66,3.29)	
Age						0.42
<50 yr	394	34(11.5%)	54(18.7%)	⊢	1.76 (1.11,2.81)	
≥50yr	1152	99(20.6%)	175(36.4%)	⊢ ■	2.21 (1.65,2.95)	
Body mass index*						0.54
<25	1285	108(16.7%)	181(28.4%)	⊢	1.97 (1.51,2.58)	
≥25	261	25(19.2%)	48(36.4%)	──	2.41 (1.37,4.21)	
College gradute						0.97
No	1356	118(17.3%)	203(30.0%)	⊢■─	2.04 (1.58,2.64)	
Yes	190	15(15.8%)	26(28.0%)	-	2.07 (1.01,4.23)	
Family history						0.65
No	1482	127(17.0%)	214(29.2%)	⊢■─	2.01 (1.57,2.58)	
Yes	64	6(21.4%)	15(41.7%)	-	2.62 (0.86,8.03)	
Hypertention		105:	101/2-			0.44
No	1331	105(15.5%)	184(28.1%)	⊢	2.12 (1.62,2.78)	
Yes	215	28(28.0%)	45(39.1%)	-	1.65 (0.93,2.94)	
Glycemia ≥ 7.0#						0.50
No	1444	117(16.4%)	214(29.4%)	⊢	2.13 (1.65,2.74)	
Yes	102	16(26.2%)	15(35.7%)	-	1.56 (0.67,3.66)	
Smoking						0.74
No	1374	95(14.2%)	196(27.7%)	⊢ ■	2.31 (1.76,3.03)	
Yes	172	38(34.9%)	33(52.4%)	—	2.06 (1.09,3.87)	
Alcohol						0.29
No	1475	119(16.4%)	216(28.9%)	⊢■	2.07 (1.61,2.67)	
Yes	71	14(28.0%)	13(59.1%)	-	3.71 (1.30,10.62)	0.40
Steatosis		161(2100()	251/20 20/0			0.48
No	1316	164(24.9%)	251(38.2%)	⊢■ ─	1.87 (1.47,2.36)	
Yes	230	34(29.1%)	55(48.7%)	 	2.32 (1.34,3.99)	0.00
Hp infection	000	62/17 70/	1.45(20.20()		(0.90
No	928	63(15.5%)	147(28.3%)	├	2.15 (1.55,2.99)	
Yes	618	70(19.0%)	82(32.8%)		2.09 (1.44,3.02)	0.60
NSAIDS use	1506	120(17.20()	224(20.00()		2.07 (1.62.2.61)	0.68
No	1506	130(17.2%)	224(29.9%)		2.07 (1.62,2.64)	
Yes	40	3(16.7%)	5(22.7%) –		1.47 (0.30,7.22)	0.04
Triglyceride>1.70#	10.42	105(16.50/)	171(20.20()		2.00 (1.52.2.(2))	0.84
No	1243	105(16.5%)	171(28.3%)		2.00 (1.52,2.63)	
Yes	303	28(20.3%)	58(35.2%)		2.13 (1.26,3.60)	0.00
Cholesterol>5.70#	1232	106(16.20/)	160(27.60/)	. <u>-</u> .	1.06 (1.40.2.50)	0.89
No		106(16.3%)	160(27.6%)		1.96 (1.49,2.59)	
Yes	314	27(21.8%)	69(36.3%)		2.05 (1.22,3.44)	0.20
LDL>3.61#	1268	112(16.69/)	159(26.9%)		1.85 (1.41.2.42)	0.39
No Yes	278	112(16.6%) 21(21.0%)	70(39.3%)		1.85 (1.41,2.43) 2.44 (1.38,4.30)	
HDL<1.09#	2/0	21(21.070)	70(39.370)		2.44 (1.38,4.30)	0.59
No	1235	91(15.8%)	184(28.0%)		2.08 (1.57,2.76)	0.39
Yes	311	42(21.1%)	45(39.5%)		2.44 (1.47,4.05)	
Symptom	511	72(21.170)	TJ(37.370)	_	2.44 (1.47,4.03)	
No	404	34(19.2%)	84(37.0%)		2.47 (1.56,3.92)	0.52
Yes	1142	99(16.5%)	145(26.7%)		1.84 (1.38,2.45)	0.32
168	1142	99(10.370)	143(20.770)		1.04 (1.38,2.43)	
			0.5	1 1.5 2 2.5 3 3.5 4 4.5 5		
			+			