

FIT Interval: 1 vs 2 years

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Kaiser Permanente Experience

- * Medical Care Program serving nearly 8 million members in California (2 regions, KPNC, KPSC)
- * FIT screening using mailed outreach, ramped up in 2007 and 2008
- * Colorectal cancer screening rates have increased significantly during that time, with corresponding decrease in CRC incidence and stage shifting to earlier stage disease

FIT outreach

- * Polymedco FIT, licensed from Eiken in Japan
- * 100 ng/mL cut off, Single test
- * Outreach done on a calendar year basis
 - * according to HEDIS metrics
- * Systematic follow up of positives, with tracking to colonoscopy.
 - * >80% adherent with colonoscopy

Jensen, et al: 2016

- * 323,349 KPNC/KPSC members aged 50-70 at time of FIT mailing date (2007 or 2008), all completed the first round of screening
- * Followed for up to 4 screening rounds
- * Response rate to FIT outreach in round 1 was 48%. Subsequent rounds: 75-86% per year (among initial responders)
- * "Sensitivity" estimated using cancers detected within one year of a negative test as a surrogate for colonoscopy gold standard. Extending the 'look back' period modestly decreased the sensitivity

Detection of CRC diagnosed within 1 year of testing

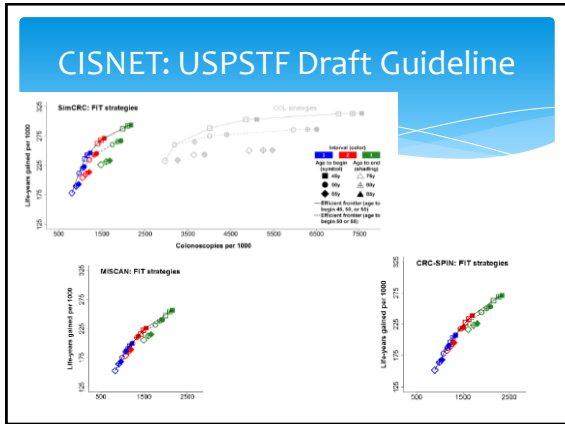
Program	Round 1 Adherence 48.2%	Round 2 Adherence 75.3%	Round 3 Adherence 83.4%	Round 4 Adherence 86.1%	Total
KPNC N = 179,423	322/380 (84.7)	84/106 (79.2)	75/97 (77.3)	71/89 (79.8)	552/672 (82.1)
KPSC N = 143,926	223/265 (84.2)	63/89 (70.8)	63/91 (69.2)	57/75 (76.0)	406/520 (78.1)
Total N = 323,349	545/645 (84.5)	147/195 (75.4)	138/188 (73.4)	128/164 (78.0)	958/1192 (80.4)

Jensen, et al. *Ann Intern Med.* 2016;164:456-463
 Inclusion in later rounds dependent on participation in Round 1.

Effectiveness By Round

	Round 1	Round 2	Round 3	Round 4	Total
Test Positivity, %	5.0	3.7	3.9	4.3	4.8
PPV					
Adenomas (KPNC only)	51.5	47.4	48.5	47.9	50.1
Adv. Adenoma (KPNC only)	14.0	10.0	10.0	8.4	11.4
Cancer (KPNC/KPSC)	3.4	2.1	2.3	2.1	2.7

Jensen, et al. *Ann Intern Med.* 2016;164:456-463



van Roon, et al

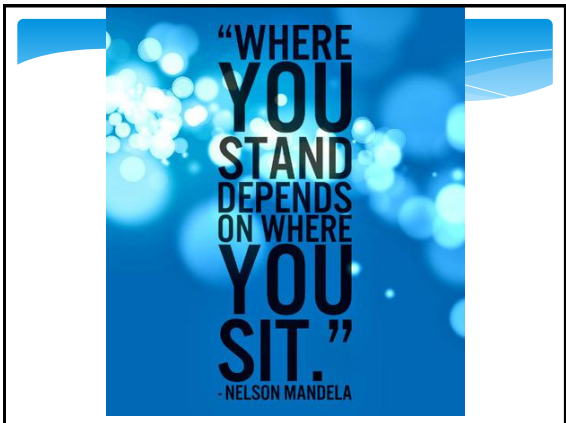
	Group I	Group II	Group III
Screening round I	1543/2385 (64.7%)	1481/2428 (61.0%)	1499/2416 (62.0%)
Detection Rate			
Adv Neopl. N, (%)	55 (3.6)	43 (2.9)	50 (3.4)
Adv Aden. N, (%)	51 (3.3)	33 (2.2)	42 (2.8)
CRC N, (%)	4 (0.3)	10 (0.7)	8 (0.5)
Screening round II	1286/2034 (63.2)	1280/2048 (62.5)	1298/2029 (64.0)
Detection Rate			
Adv Neopl. N (%)	25 (1.9)	27 (2.1)	22 (1.7)
Adv Aden. N (%)	24 (1.9)	23 (1.8)	20 (1.5)
CRC N (%)	1 (0.1)	4 (0.3)	2 (0.2)

Gut 2013;62:409-415.

Goede, et al

Start Age	Stop Age	Interval	LYG	Costs (€)	Costs/LYG (€)	ICER (€)
60	69	3	52	110,000	2115	2115
55	75	2	97	261,000	2688	3956
50	80	1.5	131	463,000	3541	7480
50	80	1	147	615,000	4191	9590

Gut 2013;62:727-734.



- ### Issues that Drive Differences
- * Cut off: 50 ng (Netherlands) vs 100 ng (KP)
 - * Colonoscopy resources (and expectations): USA vs Europe
 - * Definition of '1 year':
 - * Calendar year vs Every 12 months
 - * In our setting, every year makes sense. In the Netherlands, it is reasonable to do every 2 years.