國泰健康管理
Cathay Healthcare Management

Revisiting Colonoscopy Follow-Up Timing: A 10-Year Empirical Analysis to Support Evidence-Based Screening Strategies

Ting-Shuo Chen, Yi-Hsien Kuo, Hsiu-Tzu Hsieh

Cathay Healthcare Management Co., Ltd Taiwan

Background

- Timely detection of precancerous polyps is essential for colorectal cancer prevention. In Taiwan, where polyps are usually removed during initial colonoscopy, subsequent detection guides follow-up planning. However, current intervals often lack local, real-world validation.
- This study analyzes data from a large-scale preventive screening program to identify high-risk timeframes and inform evidence-based, context-specific follow-up strategies.

Methods

We analyzed over 40,000 health records from a high-volume preventive screening program in Taiwan (2014–2024)

40,000 + records analyzed
2014-2024 Taiwan
high-volume preventive screening

→

36,610 individuals selected
≥2 colonoscopies same patient

→

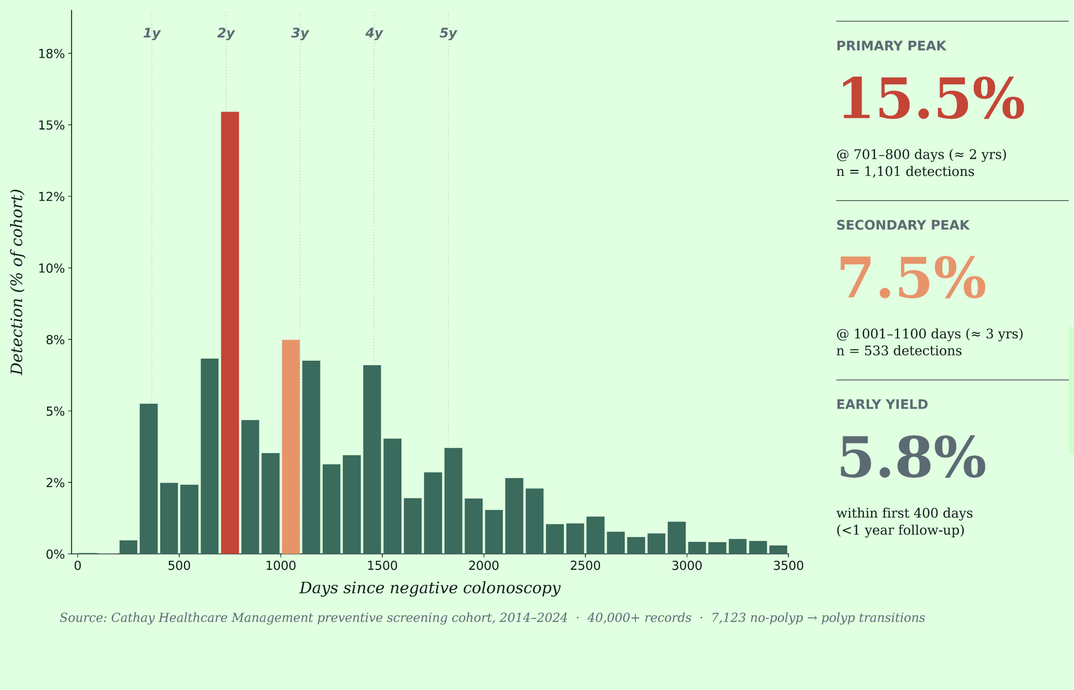
100-day interval binning
Empirical distribution
Over 0-5,000 day window

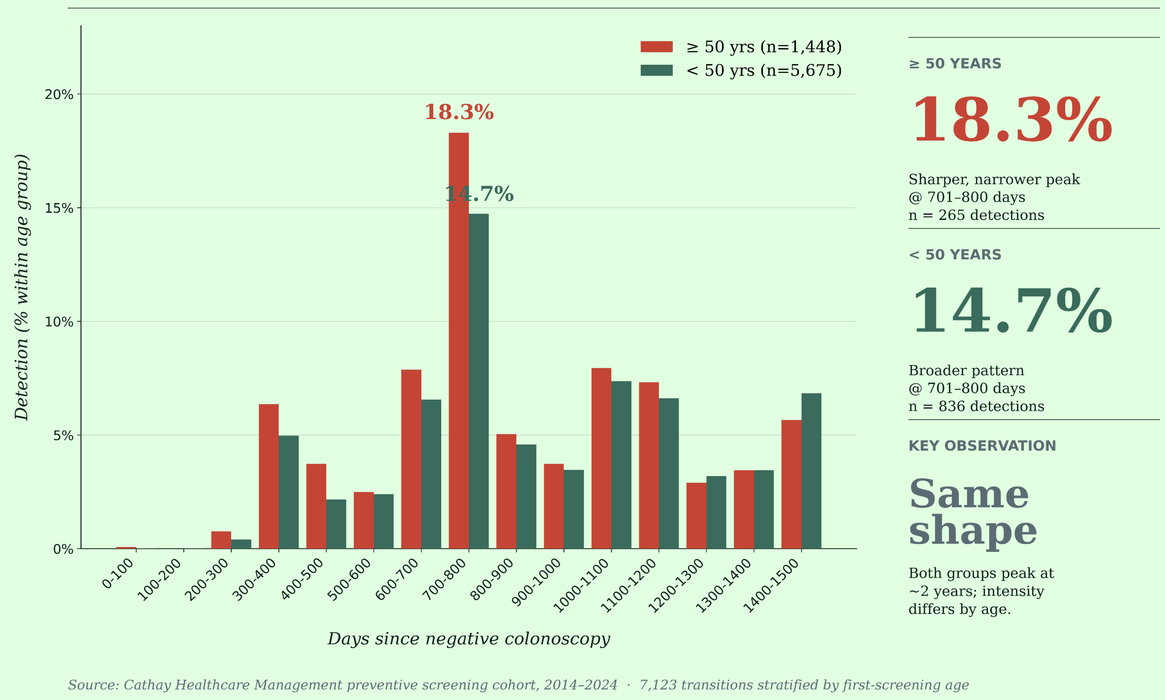
→

Two trajectories
(a) no polyp → polyp
(b) negative → abnormal
+ age-stratified ≥50 vs ＜50

Results

- Among 7,075 individuals transitioning from no polyp to polyp detection, the highest detection occurred at 701–800 days (≈15.5%), followed by 1001–1100 days (≈7.5%).
- Age-stratified analysis showed a sharper peak at 701–800 days in individuals ≥50 (≈18.3%), and a broader yet similar trend in those <50.





Conclusions

- Colonoscopy repetition within one year offers limited value in most preventive settings, while detection rises meaningfully after 2–3 years, supporting longer follow-up intervals.
- These findings provide real-world evidence for more efficient, patient-centered, and sustainable screening protocols. Derived from a large Asian cohort, the insights reflect region-specific patterns shaped by local diet and lifestyle. Future analysis will focus on adenoma-specific timing to further refine follow-up strategies.

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Correspondence : Ting-Shuo Chen
E-mail : daniel.chen@cathay-hcm.com.tw