

Diagnostic Delay-Related Predictors of Advanced-Stage Presentation in Early-Onset Colorectal Cancer

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68

patients included

64%

advanced (III–IV)

29%

metastatic (IV)

44%

initial misdiagnosis

Introduction

Early-onset colorectal cancer (EOCRC), diagnosed before age 50, is rising globally¹ and often presents at an advanced stage². Data from South Asia are limited. **Aim:** to assess delay-related factors linked to advanced-stage EOCRC.

Methods

- Design:** Retrospective exploratory cohort, tertiary care hospital, Karachi
- Population:** Age <50 y; histopathologically confirmed colorectal adenocarcinoma; Jan 2020–Dec 2025
- Variables:** Age, sex, symptom duration, iron deficiency anemia, misdiagnosis, tumor location
- Outcome:** Advanced stage = Stage III–IV
- Analysis:** Univariate $p < 0.10$, then multivariable logistic regression

Limitations

- Single center; tertiary care population
- Retrospective, exploratory, $n = 68$; wide CIs; causation cannot be inferred
- Symptom duration cannot separate patient delay from health-system delay

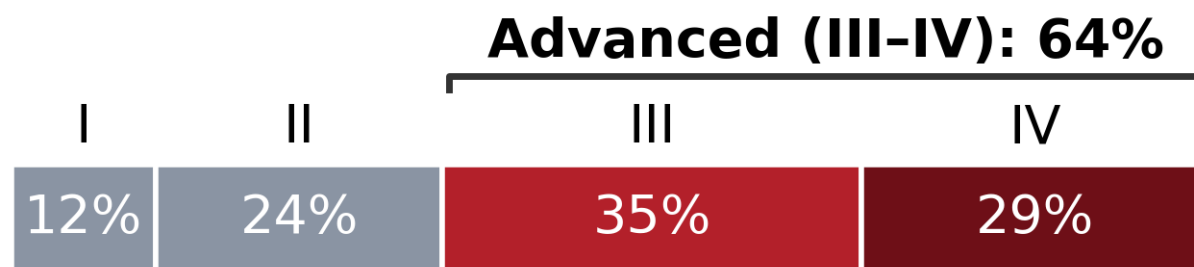
Take-home message

Young adults with rectal bleeding or anemia need prompt endoscopic evaluation, not assumed hemorrhoids or IBS.

Results

- Mean age 38.6 ± 7.2 years; **56%** male
- Rectal bleeding **72%**, altered bowel habits **65%**, iron deficiency anemia **41%**; median symptom duration **5.8 months** (IQR 3.2–9.4)

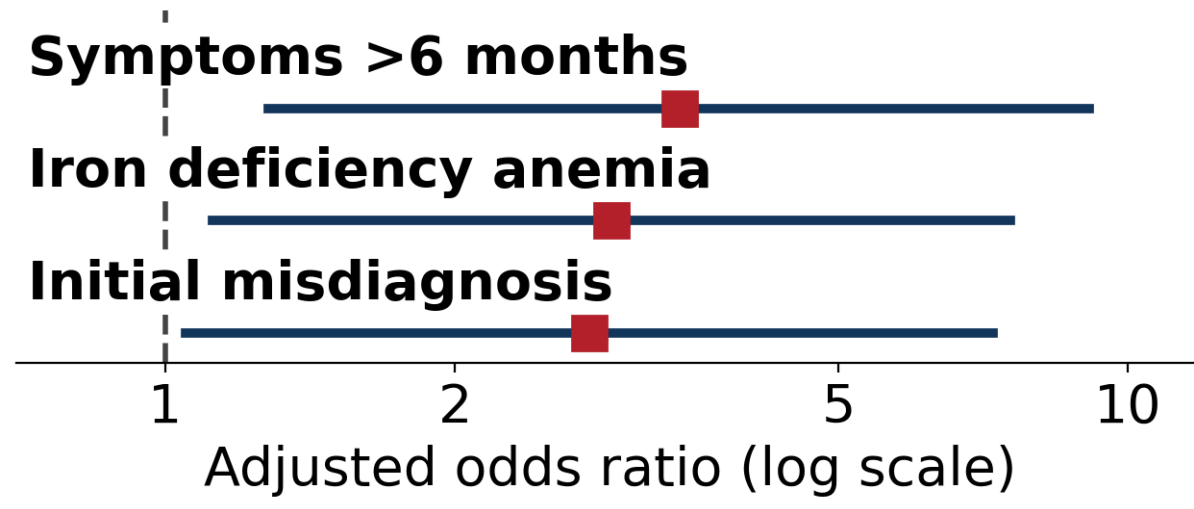
Stage distribution at diagnosis



Stage IV = metastatic

Independent predictors of advanced-stage disease (multivariable analysis)

Predictor	aOR (95% CI)	p
Symptoms >6 months	3.42 (1.28–9.11)	0.014
Iron deficiency anemia	2.91 (1.12–7.55)	0.028
Initial misdiagnosis	2.76 (1.05–7.24)	0.039



Conclusion

Advanced-stage EOCRC was associated with symptoms >6 months, initial misdiagnosis, and iron deficiency anemia, not with age, sex, or tumor location.

References: 1. Sung H, et al. Colorectal cancer incidence trends in younger versus older adults. *Lancet Oncol.* 2025;26(1):51–63.
2. Chen FW, et al. Advanced-stage colorectal cancer in persons younger than 50 years not associated with longer duration of symptoms or time to diagnosis. *Clin Gastroenterol Hepatol.* 2017;15(5):728–737.