STROBE Statement Checklist for cross-sectional studies

Section/Item	Item No.	Recommendation	Reported in manuscript
Title and abstract	1	(a) Indicate the study's design with a commonly used term in the title or abstract	✓ **Title** includes "Retrospective Cross-Sectional Study". **Abstract** states "retrospective cross-sectional analysis".
		(b) Provide in the abstract an informative and balanced summary of what was done and what was found	✓ **Abstract** includes background, methods (setting, period, sample size, analysis), key results (proportions, ORs, p-values), and conclusion.
Introduction			
Background/rationale	2	Explain the scientific background and rationale for the investigation being reported	✓ **Introduction** (paragraphs 1-4) describes global EOCRC trends, lack of data from Ethiopia, and rationale for the study.
Objectives	3	State specific objectives, including any prespecified hypotheses	✓ **Introduction** (last paragraph) and **Methods** (section 2.1 – added per editor request) state primary and secondary aims.
Methods			

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Study design	4	Present key elements of study design early in the paper	✓ **Methods, section 2.1** describes retrospective cross-sectional design, single centre, period (2019-2024).
Setting	5	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection	✓ **Methods, section 2.1 & 2.3** – TASH hospital, Addis Ababa, Ethiopia; data collection period (Oct-Dec 2024); diagnosis period (Jan 2019-Sep 2024).
Participants	6	(a) Give the eligibility criteria, and the sources and methods of selection of participants	✓ **Methods, section 2.2** – inclusion (confirmed colorectal adenocarcinoma, complete records) and exclusion criteria (incomplete data, non-adenocarcinoma).
		(b) For cross-sectional studies, report any methods to address potential sources of bias	✓ **Methods, section 2.2** consecutive sampling of all eligible cases to reduce selection bias; exclusion of incomplete records to reduce information bias. Referral bias acknowledged in **Discussion, limitations** (section 4.1) but not addressable given study design.

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Variables	7	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable.	✓ **Methods, section 2.3** defines age groups (EOCRC <50, LOCRC ≥50), tumor location categories, histologic subtypes, differentiation grade, TNM stage (AJCC 8th), metastasis definition.
Data sources/measurement	8	For each variable of interest, give sources of data and details of methods of assessment (measurement). Describe comparability of assessment methods if there is more than one group.	✓ **Methods, section 2.3** – data extracted from medical records and histopathology reports; staging from MDT records, imaging, pathology summaries.
Bias	9	Describe any efforts to address potential sources of bias	✓ **Methods, section 2.2** (exclusion of incomplete cases) and **Discussion, limitations** (section 4.1) address bias.
Study size	10	Explain how the study size was arrived at	✓ **Methods, section 2.2** – all eligible cases during study period (687 initially, 630 after exclusions). No sample size

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			calculation (descriptive study).
Quantitative variables	11	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why.	✓ **Methods, section 2.4** – age assessed for normality (Shapiro-Wilk), presented as mean±SD; groups defined a priori (<50 vs ≥50).
Statistical methods	12	(a) Describe all statistical methods, including those used to control for confounding	✓ **Methods, section 2.4** – chi-square/Fisher's exact for categorical variables; independent t-test for age; binary logistic regression (multivariable) with AOR and 95% CI.
		(b) Describe any methods used to examine subgroups and interactions	✓No subgroup or interaction analyses were prespecified or performed. This is stated in **Discussion, limitations** (section 4.1).
		(c) Explain how missing data were addressed	✓ **Methods, section 2.2** – cases with incomplete data were excluded (explained).
		(d) If applicable,	✓Consecutive sampling of all

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		describe analytical methods taking account of sampling strategy	eligible cases was used; no weighting or complex sampling adjustments were needed. Described in **Methods, section 2.2**
Results			
Participants	13	(a) Report numbers of individuals at each stage of study e.g., numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow-up, and analyzed	✓ **Results, section 3.1** and **Methods, section 2.2** – 687 initially identified, 630 met inclusion criteria, 292 EOCRC, 338 LOCRC.
		(b) Give reasons for non-participation at each stage	✓ **Methods, section 2.2** – excluded due to incomplete demographic information, duplicate entries, insufficient pathological details, non-adenocarcinoma.
		(c) Consider use of a flow diagram	✓A flow diagram was not used; numbers and reasons for exclusion are clearly presented in

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			text (**Methods, section 2.2 and Results, section 3.1**).
Descriptive data	14	(a) Give characteristics of study participants (e.g., demographic, clinical, social) and information on exposures and potential confounders	✓ **Table 1** and **Results, section 3.1-3.4** – age, sex, tumor location, histology, grade, stage, metastasis.
		(b) Indicate number of participants with missing data for each variable of interest	✓ **Methods, section 2.2** – 57 cases excluded due to incomplete data; no further missing data in the final 630.
Outcome data	15	Report numbers of outcome events or summary measures	✓ **Results, section 3.1-3.4** and **Table 1** – frequencies and percentages for all outcomes (tumor location, histology, grade, stage, metastasis).
Main results	16	(a) Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (e.g., 95%	✓ **Table 2** – multivariable logistic regression with adjusted odds ratios (AOR) and 95% CI. Adjusted for sex, tumor location, aggressive histology, differentiation grade, and

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		CI). Make clear which confounders were adjusted for and why they were included.	metastasis.
		(b) Report category boundaries when continuous variables were categorized	✓ **Methods, section 2.2** – age <50 vs ≥50. Stage grouped as I/II, III, IV.
		(c) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period	Not applicable (cross-sectional study, no time-to-event outcomes).
Other analyses	17	Report other analyses done e.g., analyses of subgroups and interactions, and sensitivity analyses	None performed (specified in limitations).
Discussion			
Key results	18	Summarize key results with reference to study objectives	✓ **Discussion, first paragraph** summarizes EOCRC proportion (46.3%), rectal predilection, poor differentiation,

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			lower metastasis in EOCRC.
Limitations	19	Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias.	✓ **Discussion, section 4.1** – single-center, retrospective, selection bias, lack of population denominators, missing molecular data, incomplete treatment data, possible staging misclassification.
Interpretation	20	Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence.	✓ **Discussion, throughout** – emphasizes influence of Ethiopia's young population structure on proportions, referral bias, need for targeted awareness rather than population screening.
Generalizability	21	Discuss the generalizability (external validity) of the study results.	✓ **Discussion, section 4.1 & 4.2** findings apply to tertiary referral settings in similar low-resource contexts; not generalizable to population-based incidence.
Other information			

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Funding	22	Give the source of funding and the role of the funders for the present study and, if applicable, for the original study on which the present article is based.	✓ **Funding statement** – "The authors received no specific funding for this work."