Supplementary Material: CARE reporting checklist

Manuscript: "Contrasting PD1 blockade responses and immunogenomic contexts in MSI high rectosigmoid adenocarcinomas"

This completed checklist maps the CARE reporting guideline items to the manuscript, which is structured according to the npj Precision Oncology Case Report format. Locations are identified by section, subsection, figure, or table because final page numbers may change during submission and typesetting.

Section	Item description	Location in manuscript (or reason for not reporting)
CARE checklist items		
1. Title	The area of focus and "case report" should appear in the title.	Title page — the title identifies the intervention (PD1 blockade), disease (MSI-high rectosigmoid adenocarcinoma), and immunogenomic focus. The phrase "case report" is not included in the title; the manuscript is designated as a Case Report in the submission system.
2. Keywords	The key elements of this case in 2–5 words.	Not reported in the manuscript. The current npj Precision Oncology Case Report format does not specify a mandatory keyword section.
3. Abstract	3a – Introduction: What does this case add? 3b – Case presentation: • The main symptoms of the patient(s). • The main clinical findings. • The main diagnoses and interventions. • The main outcomes. 3c – Conclusion: What are the main "take-away" lessons from this case?	Abstract — introduces response heterogeneity in dMMR/MSI-H colorectal cancer; summarises the two locally advanced rectosigmoid adenocarcinomas, key pretreatment immune-genomic findings, tislelizumab treatment, and divergent outcomes; and states the hypothesis-generating implications of HLA class I LOH, WNT-pathway dysregulation, and SWI/SNF alterations.
4. Introduction	Brief background summary of the case referencing the relevant medical literature.	Introduction, paragraphs 1–2 — summarises the established activity of PD1 blockade in dMMR/MSI-H colorectal cancer, the remaining problem of incomplete or non-durable response, and the rationale for evaluating conventional biomarkers and candidate immune-genomic modifiers.
5. Patient information	5a – Demographic information of the patient (age, gender, ethnicity, occupation). 5b – Main symptoms of the patient (chief complaint). 5c – Medical, family, and psychosocial history—including lifestyle and genetic information whenever possible, details about relevant comorbidities, and past interventions.	Results, "Patient A: durable clinical complete response" — 58-year-old man presenting with hematochezia; 27-year history of ulcerative colitis; no pathogenic germline variant detected; prior and subsequent interventions are described. Results, "Patient B: initial disease control followed by progression" — 33-year-old man presenting with hematochezia and intermittent fever; maternal family history of Lynch syndrome; pathogenic germline MSH6 p.Arg240Ter variant; relevant complications and prior interventions are described. Ethnicity, occupation, lifestyle, and psychosocial history are not reported.
6. Clinical findings	Describe the relevant physical examination (PE) findings.	Results, Patient A and Patient B — clinically relevant findings are reported through presenting symptoms, colonoscopy, pelvic MRI/CT, pathology and immunohistochemistry, tumour markers, and treatment-related or disease-related complications. No additional contributory physical-examination findings were documented in the manuscript.
7. Timeline	Depict important dates and times in this case (table or figure).	Figure 1A–B, with the corresponding Results subsections — show dated treatment periods, imaging/endoscopic assessments, and response milestones. Major procedures and surgery are described in Results; pathological outcomes are reported in Results and Table 1 and are not depicted in Figure 1.
8. Diagnostic assessment	8a – Diagnostic methods (e.g., physical examination, laboratory testing, imaging, questionnaires) 8b – Diagnostic challenges (e.g., financial, language, or cultural) 8c – Diagnostic reasoning including other diagnoses considered 8d – Prognostic characteristics (e.g., staging) where applicable.	Results, both patient subsections; Methods, "Treatment and response assessment," "Immunohistochemistry and pathology," and "Molecular testing" — diagnostic methods included colonoscopy with biopsy, CT, pelvic MRI, tumour markers, MMR/HER2/Ki-67/PD-L1 immunohistochemistry, pretreatment FFPE NGS, and surgical pathology. Results — Patient A was staged mrT4aN2b with mesorectal fascia involvement and EMVI grade 4, without distant metastasis. Patient B was staged cT4bN+ without definite distant metastasis and had perforation, colovesical fistula, and ureteric obstruction. Discussion, limitations paragraph; Methods, "Molecular testing" — diagnostic and interpretive challenges included different NGS platforms, lack of a dedicated HLA-I LOH module for Patient A, non-comparable cross-platform TMB estimates, and pretreatment-only profiling. No financial, language, or cultural diagnostic barriers were reported.
9. Therapeutic intervention	9a – Types of intervention (e.g., pharmacologic, surgical, preventive, self-care) 9b – Administration (e.g., dosage, strength, duration) 9c – Changes in intervention (with rationale).	Results, Patient A; Methods, "Treatment and response assessment" — 25-fraction IMRT with a simultaneous integrated boost (45 Gy to the pelvic clinical target volume, 56 Gy to the primary tumour and involved regional nodes, and 60 Gy to the enlarged left iliac nodal target) with oral capecitabine 1.5 g twice daily; diverting transverse loop colostomy after interval enlargement and local complications; tislelizumab 200 mg every 3 weeks from 14 June 2024; watch-and-wait after cCR; and total proctocolectomy for active pancolitis/stricture. Results, Patient B — tislelizumab 200 mg every 3 weeks for 17 cycles; cadonilimab 750 mg every 3 weeks for 3 cycles after PD; nivolumab plus ipilimumab for 2 cycles; ureteric stenting and nephrostomies; pelvic exenteration; and nivolumab plus regorafenib from

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		January 2026. Reasons for major treatment changes are described. The regorafenib dose and schedule are not reported in the manuscript.
10. Follow-up and outcomes	10a – Clinician- and patient-assessed outcomes 10b – Important follow-up test results (positive and negative) 10c – Intervention adherence and tolerability (and how this was assessed) 10d – Adverse and unanticipated events.	Results and Figure 1 — clinician-assessed outcomes were based on RECIST v1.1, serial CT/MRI, colonoscopy, tumour markers, and surgical pathology. Patient A achieved PR by cycle 4, cCR after 13 cycles, and later pCR (ypT0N0); CEA and CA19-9 remained normal. A perianal abscess and anal fistula occurred after chemoradiotherapy and before tislelizumab. No severe UC flare requiring systemic immunosuppression occurred during active tislelizumab treatment; active pancolitis/stricture and total proctocolectomy were subsequently reported. Patient B initially achieved SD and later developed PD, postrenal obstruction/renal dysfunction, recurrent urinary-tract infections, and immune-mediated colitis during nivolumab plus ipilimumab; postoperative pathology showed mucinous adenocarcinoma (ypT4N0). No patient-reported outcome measure or formal adherence assessment is reported in the manuscript.
11. Discussion	Discussion (including conclusion): 11a – Strengths and limitations of the management of this case 11b – Relevant medical literature 11c – Rationale for conclusions (including assessment of cause and effect) 11d – Main “take-away” lessons of this case report.	Discussion — compares the divergent clinical courses with relevant literature on TMB, PD-L1, HLA class I antigen presentation, SWI/SNF/ARID1A/SMARCA4 biology, DDR and genome instability, WNT/β-catenin signalling, RAS/PI3K alterations, inflammatory bowel disease, and inflamed pelvic microenvironments. The limitations paragraph explicitly identifies the two-patient design, different NGS platforms, pretreatment-only profiling, and lack of functional or spatial immune validation. Causal claims are avoided and the genomic-clinical associations are presented as hypothesis-generating. The final paragraph states the main clinical lesson: MSI-H/dMMR status generally supports PD1 sensitivity but may not ensure deep or durable benefit in every patient; pretreatment NGS may help identify rare immune-evasive or immune-excluded contexts requiring closer early assessment or alternative strategies.
12. Patient perspective	When appropriate, patients should share their perspectives on the treatments they received.	Not reported. Formal patient-perspective narratives were not collected. Both patients provided written informed consent for publication of their clinical and molecular data.
13. Informed consent	Did the patient give informed consent? Please provide if requested.	Methods, “Ethics and consent” — the case report was approved by the Institutional Review Board of Peking Union Medical College Hospital (I-22PJ1021). Both adult patients provided written informed consent to participate and to publish their clinical data, molecular results, and associated materials.

Reporting statement in the manuscript

Methods, “Reporting standards”: “This report follows the npj Precision Oncology Case Report format. A complete CARE checklist is provided as Supplementary Material.”

CARE guideline references

1. Gagnier JJ, Kienle G, Altman DG, Moher D, Sox H, Riley D, et al. The CARE guidelines: consensus-based clinical case reporting guideline development. J Clin Epidemiol. 2014;67:46–51.
2. Riley DS, Barber MS, Kienle GS, Aronson JK, von Schoen-Angerer T, Tugwell P, et al. CARE guidelines for case reports: explanation and elaboration document. J Clin Epidemiol. 2017;89:218–235.