

Appendix 1 Search strategy of case reports

Separated searches in Scopus and PubMed were performed by two investigators independently. Limited to English, and from 01/01/2006 to 1/1/2022.

1 Scopus:

- (TITLE-ABS-KEY ("locally advanced rectal cancer") AND TITLE-ABS-KEY (mismatch-repair AND deficient) OR TITLE-ABS-KEY (microsatellite AND instability) AND TITLE-ABS-KEY (immunotherapy) AND TITLE-ABS-KEY (pseudo-progression)) AND PUBYEAR > 2017
- (TITLE-ABS-KEY ("locally advanced rectal cancer") AND TITLE-ABS-KEY (mismatch-repair AND deficient) OR TITLE-ABS-KEY (microsatellite AND instability) AND TITLE-ABS-KEY (immunotherapy)) AND PUBYEAR > 2017

2 PubMed:

- (("rectal neoplasms"[MeSH Terms] OR ("rectal"[All Fields] AND "neoplasms"[All Fields]) OR "rectal neoplasms"[All Fields] OR ("rectal"[All Fields] AND "cancer"[All Fields]) OR "rectal cancer"[All Fields]) AND ("neoadjuvancy"[All Fields] OR "neoadjuvant therapy"[MeSH Terms] OR ("neoadjuvant"[All Fields] AND "therapy"[All Fields]) OR "neoadjuvant therapy"[All Fields] OR "neoadjuvant"[All Fields] OR "neoadjuvants"[All Fields] OR "neoadjuvent"[All Fields]) AND ("immunotherapy"[MeSH Terms] OR "immunotherapy"[All Fields] OR "immunotherapies"[All Fields] OR "immunotherapy s"[All Fields])) AND (casereports[Filter])

Table S1 Neoadjuvant therapy using immune checkpoint inhibitors for MSI-H/dMMR LARC: Scoping review of Phase II

Reference	n	MSI-H/ dMMR	Previous treatment	Neoadjuvant immunotherapy	Response	Strategy	Median follow-up (months)
Yuki S (16), 2020	42	(n=5)	CRT (n=1)	Nivolumab (n=5)	pCR (n=3, 60%)	Surgery	6.6
Lin Z (17), 2021	27	(n=1)	no	SCRT, ChT + Camrelizumab	pCR (n=1, 100%)	Surgery	NR
Salvatore L (18), 2021	96	(n=1)	no	CRT + Avelumab	NR	NR	NR
Cercek et al. (6), 2022	12	(n=12)	no	Dostarlimab (n=12)	cCR (n=12, 100%)	Watch and Wait (n=12)	12

MSI-H/dMMR, microsatellite instability-high/deficient mismatch repair; LARC, locally advanced rectal cancer; CRT, chemoradiotherapy; pCR, pathological complete response; SCRT, short course radiotherapy; ChT, chemotherapy; NR, not reported; cCR, clinical complete response.