

Supplementary Table 1 Summary of Case Reports and Clinical trials of anti-PD1/PD-L1 in Advanced Osteosarcoma

Author (year published)	Therapy	Disease	Type	result
Merchant ¹ (2016)	Ipilimumab	recurrent or refractory solid tumors, including osteosarcoma (n=8)	multicentre, open-label, single-arm, phase 1-2 trial	no CR or PR
Tawbi ² (2017)	pembrolizumab	advanced soft tissue and bone sarcomas	Multicentre, Single arm, Phase 2 Trial	1/22 PR in osteosarcoma, the mPFS and the mOS was 8 weeks [95% CI, 7-9] and 52 weeks [95% CI, 40-72]in BS
D'Angelo ³ (2018)	Nivolumab +/- ipilimumab	Metastatic or unresectable sarcoma (includ 9 bone sarcomas)	non-comparative multicenter randomized phase II study	On the nivolumab monotherapy arm, The mPFS was 1.7 months [n=42, 95% CI (1.4-4.3months). The mOS was 10.7months [n=42, 95% CI (5.5-15.4)], The longest PFS and OS was 13months and 16.5 months,
Le Cesne ⁴ (2019)	pembrolizumab +cyclophosphamide	metastatic and/or unresectable osteosarcoma	open-label, multicentre, phase 2 study	1/17PR, The 6month non-progression rate was 13.3% (95% CI = 1.7-40.5). The mPFS was 1.4 months (95% CI = 1.0 months-1.4 months), and the mOS was 5.6 months (95% CI = 2.1 months-12.1 months),
Davis ⁵ (2020)	Nivolumab	the common paediatric solid tumours	multicentre, open-label, single-arm, phase 1-2 trial	no significant single-agent activity
xie ⁶ (2020)	Apatinib +camrelizumab	Advanced osteosarcoma	single- arm, open- label, phase 2 trial	The mPFS of 6.2 months (95% CI 4.0 to 6.9) and CBR of 30.2% (95% CI 17.2% to 40.1%)
Georger ⁷ (2020)	Atezolizumab	solid tumours	multicentre phase 1-2 study	no CR or PR in osteosarcoma patients(n=10)
Boye ⁸ (2021)	pembrolizumab	Advanced osteosarcoma	single-arm, open-label, phase 2 trial	Estimated mPFS was 1.7 months (95% CI 1.2-2.2). mOS was 6.6 months (95% CI 3.8-9.3), At time of data cut-off, 11 patients were deceased due to osteosarcoma.
Sterz ⁹ (2021)	Ipilimumab+ nivolumab	metastasized osteosarcoma	Case report	PFS: at least one year

PFS: median progression-free survival. mOS: median overall survival. CR: complete response. PR: partial response OR: objective responses

BS: bone sarcoma. CBR :the proportion of patients who did not have disease progression at 24 weeks.

Reference

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