Title

1419PD Assessment of Surgical Downstaging in an Open-Label Phase 2 Trial of Denosumab in Patients with Giant Cell Tumor of Bone

Authors

Ferrari, S
Rutkowski, P
Grimer, RJ
et al.

Publication Date

2014-09-01

DOI

10.1093/annonc/mdu354.8

Peer reviewed

Annals of Oncology 25 (Supplement 4): iv494–iv510, 2014
doi:10.1093/annonc/mdu354.8

sarcoma

1419PD

ASSESSMENT OF SURGICAL DOWNSTAGING IN AN OPEN-LABEL PHASE 2 TRIAL OF DENOSUMAB IN PATIENTS WITH GIANT CELL TUMOR OF BONE

S. Ferrari[1], P. Rutkowski[2], R.J. Grimer[3], P.D. Stalley[4], S.P.D. Dijkstra[5], A. Pienkowski[2], G. Vaz[6], L.L. Seeger[7], A. Feng[8], B.A. Bach[9]

[1]*Chemotherapy Unit, Istituto Ortopedico Rizzoli, Bologna, ITALY*
[2]*Soft Tissue/bone Sarcoma and Melanoma, Maria Sklodowska-Curie Memorial Cancer Center and Institute of Oncology, Warsaw, POLAND*
[3]*Orthopaedic Oncology Unit, Royal Orthopaedic Hospital, Birmingham, UK*
[4]*Department of Orthopaedic Surgery, Royal Prince Alfred Hospital, Sydney, NSW, AUSTRALIA*
[5]*Department of Orthopedic Surgery, Leiden University Medical Center, Leiden, NETHERLANDS*
[6]*Department of Orthopedic Surgery, Edouard Herriot Hospital, Lyon, FRANCE*
[7]*Department of Radiology, David Geffen School of Medicine at University of California, Los Angeles, Los Angeles, CA, USA*
[8]*Global Biostatistical Science, Amgen Inc., Thousand Oaks, CA, USA*
[9]*Global Development Oncology Therapeutics, Amgen Inc., Thousand Oaks, CA, USA*

Aim: Surgical resection, the standard treatment for giant cell tumor of bone (GCTB), may be associated with severe morbidity and may not be curative for all lesions. In an open-label phase 2 study, treatment with denosumab was associated with delayed surgery and/or a less morbid procedure in most patients with resectable GCTB. We report an unplanned, interim analysis of surgical downstaging in patients with resectable GCTB whose initially planned surgery was expected to result in severe morbidity.

Methods: Adults or skeletally mature adolescents with resectable GCTB received denosumab 120 mg SC every 4 weeks and on study days 8 and 15. Planned and actual GCTB surgical procedures after treatment are reported. Procedure selection and timing were based on review of radiographic imaging and clinical response.

Results: Overall, 222 patients enrolled and were evaluable for surgical downstaging (men, 46%; median age, 34 y); most had lesions in the lower (n=117) and upper (n=62) extremities or pelvis/sacrum (n=33). In total, 190 (86%) patients had either no surgery (n=106; 48%) or a less morbid procedure (n=84; 38%). All 222 patients received denosumab; median (range) time on denosumab was 14.1 (1.0–57.1) months for all patients and 18.4 (1.0–57.1) months for the 106 patients with no surgery. The proportions of patients with a planned surgical procedure who did not undergo surgery were: hemipelvectomy (n=8/10; 80%), amputation (n=32/40; 80%), joint/prosthesis replacement (n=6/25; 24%), joint resection/fusion (n=14/35; 40%), en bloc resection (n=31/85; 36%), en bloc excision (n=7/8; 88%), curettage (n=8/18; 44%). The native joint preservation rate was 96% in the 25 patients with a planned joint/prosthesis replacement and 86% in 35 patients with a planned joint resection/fusion.

Conclusions: Consistent with initial results, treatment with denosumab was associated with avoidance of invasive surgery or a less morbid procedure than was planned in most patients with resectable GCTB.

Disclosure: S. Ferrari: Advisory board (Amgen Inc., GlaxoSmithKline); research funding (MolMed, Pharmar, Morphotek, Amgen Inc.); honoraria (Takeda); P. Rutkowski: honoraria for lectures (Amgen Inc.); R.J. Grimer: Advisory board (Amgen Inc.); S.P.D. Dijkstra: advisory board (Implantcast GmbH); L.L. Seeger: honoraria for advisory boards and travel expenses (Amgen Inc.); A. Feng: employment by and stock ownership in Amgen Inc.; B.A. Bach: employment by and stock ownership in Amgen Inc. All other authors have declared no conflicts of interest.

Table: 1419PD

Planned Procedure	Actual On-Study Procedure						
	Curettage (n=80)	Marginal Excision (n=3)	En Bloc Excision (n=1)	En Bloc Resection (n=20)	Joint Resection/ Fusion (n=5)	Joint/Prosthesis Replacement (n=6)	Amputation (n=1)
Hemipelvectomy (n=10)	1	0	0	0	0	1	0
Amputation (n=40)	3	2	0	0	0	3	0
Joint/prosthesis replacement (n=25)	16	0	1	1	0	1	0
Joint resection/fusion (n=35)	14	0	0	2	5	0	0
En bloc resection (n=85)	39	1	0	13	0	1	0
En bloc excision (n=8)	0	0	0	1	0	0	0
Marginal excision (n=1)	0	0	0	0	0	0	1
Curettage (n=18)	7	0	0	3	0	0	0