



GIOVANNI BARBANTI-BRODANO, MD

CURRICULUM VITAE

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Date of Birth: December 4th, 1968
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Languages: Italian (native), English, French

EDUCATION / TRAINING

Institution and location	Degree	Year (date)	Field of study
Liceo Classico "San Luigi"	(Bologna, Italy)	1984- 1989	Humanities
University of Bologna	(Bologna, Italy) MD	1989 – 1994	Degree of Medicine and Surgery
Wistar Institute	(Philadelphia, USA)	1991	Research program "HTLV-I-like virus in leukemia" (Prof. Hilary Koprowski)
University of Bologna	(Bologna, Italy) MD	1994 – 1999	Residency in Orthopedics and Traumatology
Rizzoli Orthopedics Institute	(Bologna, Italy) MD	1996	Internship in Spine Surgery, Pediatric Orthopedics
Rizzoli Orthopedics Institute	(Bologna, Italy) MD	1994-1999	Internship in Laboratory of Biomaterials Research and Laboratory in Oncology Research
Rizzoli Orthopedics Institute	(Bologna, Italy) MD	1997	Internship in Orthopedics Oncology
Rizzoli Orthopedics Institute	(Bologna, Italy) MD	1997- 1998	Internship in General Orthopedics and Traumatology
Centre Hospitalier Universitaire	(Nice, France) MD	1998	Fellow at Prof. Claude Argenson's Unit
Rizzoli Orthopedics Institute	(Bologna, Italy) MD	1999	Internship in Spine Surgery
University Spine Center	(Tennessee, USA) MD	2004	Fellow at Prof. Kevin Foley's Unit
Dartmouth Spine Center	(Dartmouth, USA) MD	2004	Fellow at Dr. James Weinstein's Unit
Spine Center of Hospital Universitario	(Valencia, Spain) MD	2005	Fellow at Dr. Antonio Martin Belloch's Unit

MEDICAL BOARDS REGISTRATION

Institution	Country	Year (date)	Ref. Number
Italian Medical Board and Specialist Register	Italy	1995– present	"Albo dei Medici-Chirurghi di Bologna", no. 13181

POSITIONS AND EMPLOYMENT

Year	Position	Institution and location
1999 - 2000	MD	Department of Orthopedics and Traumatology, San Maurizio Hospital, Bolzano, Italy
2000 - 2007	MD	Department of Orthopedics and Traumatology, Spine Center, Maggiore Hospital, AUSL, Bologna, Italy
2007 - present	MD	Department of Oncological and Degenerative Spine Surgery, Rizzoli Orthopedics Institute, Bologna, Italy [Link]

CLINICAL ACTIVITY: From 2007 to 2019 he performed more than 1000 surgical procedures at Rizzoli Orthopedics Institute, for oncological and degenerative spine diseases.

SCIENTIFIC SOCIETIES MEMBERSHIP

Year	Position	Society
1999 – present	Active Member	Societa' Italiana di Ortopedia e Traumatologia (S.I.O.T.) Italian Society of Orthopaedics and Traumatology
1999 – present	Active Member	Societa' Italiana di Chirurgia Vertebrale (G.I.S.) Italian Society of Spine Surgery
2003 – present	Active Member	AOSpine, European Section – Chairman AOSIT 2013-2015
2008 – present	Founder	BIOSPINA, italian scientific association promoting the research for spine disease
2016- 2019		AOSpine European Board Research Officer

RESEARCH AND CLINICAL STUDIES

Year	Position	Study, institution and location
2007- 2011	Principal Investigator	Cellular and molecular analysis for the identification and characterization of osteogenic progenitors isolated from adult tissues. Rizzoli Orthopedics Institute, Bologna, Italy
2009 – 2014	Principal Investigator	Prospective randomized study for the treatment of osteoporotic vertebral fractures, comparison between two techniques: vertebroplasty and kyphoplasty. Rizzoli Orthopedics Institute, Bologna, Italy
2010 – 2013	Principal Investigator	Evaluation of pain and functional recovery after surgical treatment for low back pain caused by degenerative kyphoscoliosis. Rizzoli Orthopedics Institute, Bologna, Italy
2010 – 2013	Assistant Investigator	Pilot study- Spondylolisthesis: posterolateral interbody fusion (PLIF) vs transforaminal interbody fusion (TLIF), comparison between two techniques. Rizzoli Orthopedics Institute, Bologna, Italy
2010- 2013	Assistant Investigator	Pilot study- Lumbar disc herniation: percutaneous radiofrequency vs surgical treatment, comparison between two techniques. Rizzoli Orthopedics Institute, Bologna, Italy
2010- 2013	Assistant Investigator	Evaluation of survival related to the application of WBB or Enneking staging systems in the treatment of primary spine tumour: a pilot study. Rizzoli Orthopedics Institute, Bologna, Italy

2011- 2013:	Assistant Investigator	Evaluation of quality of life of patients affected by vertebral osteomyelitis following a multidisciplinary diagnostic and therapeutic treatment at 1, 3, 6, 12 months of follow up. Rizzoli Orthopedics Institute, Bologna, Italy
2011- 2015	Assistant Investigator	Evaluation of survival and pain reduction in the surgical treatment of vertebral localizations of hematopoietic tumours. Rizzoli Orthopedics Institute, Bologna, Italy
2011- 2013	Assistant Investigator	Evaluation of surgical complications, survival and pain reduction of in the treatment of vertebral metastases at 1-3-6-12 months follow up and the every year. Rizzoli Orthopedics Institute, Bologna, Italy
2011- 2013	Assistant Investigator	Predictor factors of mortality and morbidity in the surgical treatment of primary spine tumors. Rizzoli Orthopedics Institute, Bologna, Italy
2010-2011	Principal Investigator	An observational, prospective, multicentric study on spinal fusion procedures MAST™ for the treatment of degenerative spine diseases. Rizzoli Orthopedics Institute, Bologna, Italy
2012- 2014	Assistant Investigator	Comparison between surgical and non surgical treatment for lumbar disc herniation: a randomized study. Rizzoli Orthopedics Institute, Bologna, Italy
2012- 2014	Assistant Investigator	Comparison between surgical and non surgical treatment for lumbar stenosis: a randomized study. Rizzoli Orthopedics Institute, Bologna, Italy
2012- 2014	Assistant Investigator	Comparison between surgical and non surgical treatment for degenerative spondylolisthesis: a randomized study. Rizzoli Orthopedics Institute, Bologna, Italy
2013- 2017	Assistant Investigator	Prospective multicentric clinical study on the use of an elastic silicone polymer (VK-100) for vertebral augmentation (elastoplasty) in failure fractures and in selected cases of pathological fractures. Rizzoli Orthopedics Institute, Bologna, Italy
2013- 2023	Assistant Investigator	Prospective non controlled study to evaluate the efficacy of the treatment of sacrum chordoma by carbon ion therapy- a pilot study. Rizzoli Orthopedics Institute, Bologna, Italy
2013- 2023	Assistant Investigator	Prospective non controlled study to evaluate the efficacy of the treatment of mobile spine chordoma by carbon ion therapy before the surgery- a pilot study. Rizzoli Orthopedics Institute, Bologna, Italy
2014- 2017	Assistant Investigator	A multicenter randomized controlled post-market clinical follow up trial comparing the effectiveness and safety of the iFUSE Implant System® versus conservative management for patients with chronic, disabling SI joint pain. Rizzoli Orthopedics Institute, Bologna, Italy
2014- 2016	Assistant Investigator	Spinal instrumentation systems “CD Horizon® Legacy” and “CD Horizon® Solera”. Retrospective and prospective observational study on the stability of single thread and dual thread pedicle screws. Rizzoli Orthopedics Institute, Bologna, Italy
2014- 2016	Assistant Investigator	CarboFix pedicle screws system. Rizzoli Orthopedics Institute, Bologna, Italy

2015- 2017	Assistant Investigator	PathFx project: study on a tool to evaluate the survival in patients with bone metastases. Rizzoli Orthopedics Institute, Bologna, Italy
2015- 2018	Principal Investigator	Comparison between <i>in toto</i> or concentrated vertebral bone marrow cultured in association with biomaterials in different cell culture conditions and also in the presence of biophysics stimuli. Rizzoli Orthopedics Institute, Bologna, Italy
2015- 2016	Assistant Investigator	Anterior column reconstruction after tumor resection: use of a titanium/carbon cage or allogenic bone graft reinforced with titanium? Rizzoli Orthopedics Institute, Bologna, Italy
2016- 2017	Principal Investigator	Studio in aperto per valutare l'efficacia e la sicurezza di un nuovo idrogel (HYADD4-G) in pazienti con patologia degenerativa del disco. Studio Pilota" Rizzoli Orthopedics Institute, Bologna, Italy
2016- 2021	Assistant Investigator	Studio osservazionale sull'impiego di protesi "custom-made" in titanio realizzate in stampa 3d per la ricostruzione circonferenziale della colonna vertebrale anteriore a seguito di resezioni "en bloc". Rizzoli Orthopedics Institute, Bologna, Italy
2017- ongoing	Principal Investigator	Studio osservazionale retrospettivo e prospettico per la raccolta di dati e la rilevazione degli esiti clinici e radiografici di interventi chirurgici nelle patologie degenerative, oncologiche, infettive e traumatiche della colonna vertebrale. Rizzoli Orthopedics Institute, Bologna, Italy
2017- ongoing	Assistant Investigator	"Primary Tumor Research and Outcome Network (PTRON)": uno studio osservazionale prospettico multicentrico per la gestione dei tumori primitivi della colonna vertebrale. Rizzoli Orthopedics Institute, Bologna, Italy
2017- 2019	Principal Investigator	Impiego del sostituto osseo SintLife® in procedure di artrodesi vertebrale. Studio pilota. Rizzoli Orthopedics Institute, Bologna, Italy
2017- ongoing	Assistant Investigator	SAcral Chordoma: studio randomizzato e osservazionale sulla chirurgia in confronto alla radioterapia nella malattia primitiva localizzata (SACRO).
2018- 2022	Principal Investigator	MSC vs SAE: Studio clinico randomizzato per la valutazione dell'efficacia dell'infiltrazione di concentrato midollare rispetto all'embolizzazione arteriosa selettiva nel trattamento della cisti ossea aneurismatica vertebrale
2018- 2019	Principal Investigator	SINS-67: Valutazione della resistenza meccanica di una vertebra affetta da tumore primitivo o secondario e sua correlazione con SINS score.
2018- ongoing	Assistant Investigator	MTRON: Metastatic Tumor Research and Outcome Network (MTRON): un registro multicentrico per la gestione dei tumori metastatici della colonna vertebrale.
2018- ongoing	Assistant Investigator	Use of devices in non-metallic and X-ray translucent material for vertebral stabilization in patients suffering from thoraco-lumbo-sacral degenerative pathologies.

RESEARCH GRANTS

Year	Position	Grant amount	Grant title / funding source
2007- 2008	Principal Investigator	Euro 15.000	Research program "Evaluation of osteoinduction and osteoconduction of ceramic biomaterials by a new cellular model"/ Finceramica SpA
2007- 2009	Principal Investigator	Euro 150.000	Research program "Molecular approach for the isolation and characterization of the mesenchymal stem cells from adult bone tissue" / Fondazione Cassa di Risparmio in Bologna
2009- 2011	Principal Investigator	CHF 50.000	"Osteoporotic vertebral fractures. Vertebroplast vs kyphoplasty. A randomized study" /AOSSINE Europe.

2011- 2012	Principal Investigator	Euro 45.000	"Osteoporotic vertebral fractures. Vertebroplasty vs kyphoplasty. A randomized prospective study." / DePuy International Ltd.
2011- 2015	Assistant Investigator	Euro 170.000	Finalized Research program "Comparative effectiveness of treatment for degenerative disease"/ Italian Minister of Health
2014- 2017	Assistant Investigator	Euro 2450 for each patient enrolled	"A multicenter randomized controlled post-market clinical follow up trial comparing the effectiveness and safety of the iFUSE Implant System® versus conservative management for patients with chronic, disabling SI joint pain."/ SI-BONE Srl.
2014- 2016	Assistant Investigator	Euro 40.000	"Spinal instrumentation systems "CD Horizon Legacy" and "CD Horizon Solera". Retrospective and prospective observational study on the stability of single and dual thread pedicle screws"/ Medtronic Italia SpA.
2014- 2016	Assistant Investigator	Euro 40.000	"CarboFix pedicle screws system". / CarboFix Ltd.
2018- 2021	Assistant Investigator	Euro 385.413	qSINS: quantitative revision of the Spinal Instability Neoplastic Score including CT-based assessment of spinal parameters and finite element modeling of vertebral strength. A prospective clinical trial.

HONORS AND AWARDS

Year	Description
2000	Italian Orthopedic and Traumatology Society (SIOT) Prize "Lumbar Instability: mid-term revision of 60 cases treated by Posterior Lumbar Interbody Fusion"
2007	Italian Spine Society - GIS, Best Presentation Award "Minimally invasive percutaneous fixation in spine fractures"
2010	Italian Spine Society - GIS, Best Presentation Award "Mesenchymal stem cells and biomaterials to improve spine fusion"
2014	AOSPINE Europe excellence in education Award
2015	Italian Neurosurgery Society - SiNCH, Best Presentation Award "Biomaterials. A good alternative for spine fusion"
2019	Biomaterials and Novel Technologies for Healthcare- BioMaH- Best Poster Award "Carbon-fiber-reinforced PEEK fixation system in the treatment of spine tumours"
2020	Winner of German Ochoa Traveling Fellowship Award 2020

ORGANIZATION OF CONGRESSES:

30.09.2015: Member of the Scientific Committee of the congress "Degenerative disease of the lumbar spine- The treatment: What- How-When- Why?", Istituto Ortopedico Rizzoli, Bologna.

17.02.2017: President of the Congress "Biomaterials and Biotechnologies in spinal surgery", Istituto Ortopedico Rizzoli, Bologna.

9.02.2018: President of the Congress "The patient's safety in orthopedics surgery", Istituto Ortopedico Rizzoli, Bologna.

12.04.2019: AO Spine local seminar "Complications in spinal surgery", Istituto Ortopedico Rizzoli, Bologna.

PUBLICATIONS (CON IF)

1. Baldini N, Scotlandi K, Barbanti-Bròdano G, Manara MC, Maurici D, Bacci G, Bertoni F, Picci P, Sottile S, Campanacci M, and Serra M: "Expression of P-glycoprotein in high-grade osteosarcomas in relation to Clinical Outcome" *N Engl J Med* 1995;333:1380-5. IF= 79,260
2. Baruffaldi F, Barbanti-Bròdano G, Testoni M, Gnudi S, Paderni S, Toni A, Giunti A: "La densitometria femorale quale possibile indicatore preoperatorio alla cementazione della protesi d'anca" *Radiol Med* 1996;92:193-198. IF= 1,819
3. Serra M, Scotlandi K, Manara MC, Maurici D, Benini S, Sarti M, Nini G, Barbanti-Bròdano G, and Baldini N: "Evaluation of P-glycoprotein expression in soft tissue sarcomas of the extremities" *Cytotechnology* 1996;19:253-256. IF= 1,461
4. Greggi T, Barbanti-Bròdano G, Tabarroni M, Parisini P: "La diastematomyelia nella scoliosi congenita. Revisione della letteratura e descrizione di un caso clinico" *Chir Organi Mov* 1997;LXXXII:83-89.
5. Baruffaldi B, Mattioli P, Testoni M, Toani A, Barbanti-Bròdano G, Binazzi R, Amoroso L, Cerioni M, Verhulst D, De Groof E, Klutke J: "The ph-net project: a feasibility study for ISDN based applications of telemedicine in the orthopaedic field" *Adv Clin Path* 1998;2:127-189.
6. Serra M, Maurici D, Scotlandi K, Barbanti-Bròdano G, Manara MC, Benini S, Picci P, Bertoni F, Bacci G, Sottile S, and Baldini N: "Relationship between P-glycoprotein and p53 in high-grade osteosarcoma" *Int J Oncology* 1999;14:301-307. IF= 3,333
7. Sudanese A, Toni A, Terzi S, Brizio L, Barbanti-Bròdano G, Testoni M, Guerra E, Giunti A: "Artroprotesi d'anca dopo osteotomia femorale" *Chir Organi Mov* 1999;LXXXIV:37-48.
8. Barbanti Bròdano G, Rodorigo G, Tigani D, Moio A, De Rosa V: "L'artropatia da deficit del fattore VII della coagulazione. Descrizione di un caso clinico" *Chir Organi Mov*; 1999;LXXXIV:387-391.
9. Testoni M, Baruffaldi F, Mattioli P, Sudanese A, Terzi S, Barbanti-Bròdano G, Toni A: "The evaluation of radiolucency condition in total hip arthroplasty: a statistical comparison of the diagnostic capability of digitised image versus conventional x-ray film" *European Radiology* 2000;10,601-608. IF= 4,027
10. Pignatti G, Barbanti Bròdano G, Ferrari D, Gherlinzoni F, Bertoni F, Bacchini P, Barbieri E, Giunti A, and Campanacci M: "Extraabdominal desmoid tumor. A Study of 83 cases" *Clin Orthop and Related Res* 2000;375,207-213. IF= 4,091
11. Guzzardella GA, Morrone G, Torricelli P, Rocca M, Tigani D, Barbanti Bròdano G, Ferrari D, Fini M, Giardino R: "Assesment of low-power laser biostimulation on chondral lesion: an "in vivo" experimental study" *Artificial Cells, Blood Substitutes, Immobilization Biotechnology* 2000;28(5),441-449.
12. Morrone G, Guzzardella GA, Torricelli P, Rocca M, Tigani D, Barbanti Bròdano G, Fini M, Giardino R: "Osteochondral lesion repair of the knee in the rabbit after low-power diode GA-AL-AS laser biostimulation: an experimental study" *Artificial Cells, Blood Substitutes, Immobilization Biotechnology* 2000;28(4),321-336.
13. Trentani P, Ferrari D, Trentani F, Barbanti Bròdano G, Tigani D: "Frattura sovracondiloidea del femore secondaria ad artroprotesi totale di ginocchio. Descrizione di due casi clinici" *Chir Organi Mov*. 2000 Jan-Mar;85(1):73-8. Review.
14. Barbanti Bròdano G, Donati U, Palmisani M, Pompili M, Boriani S: "Artrodesi lombare intersomatica per via posteriore. Revisione a medio termine di 60 casi" *Chir Organi Mov* 2000;LXXXV,345-360.
15. Barbanti Bròdano G, Bandiera S, Pascarella R, GasbarriniA: "Instabilità lombare: revisione a medio termine di 60 casi trattati mediante artrodesi lombare intersomatica per via posteriore" *Spine News* 2000;X,3,256-262.
16. Pignatti G, Barbanti Bròdano G, Marinelli A, Bertoni F, Giunti A: "Lumbar intraspinal mucous cyst: case report" *J Orthopaed Traumatol* 2001;1,51-53.
17. Barbanti Bròdano G, Donati U, Palmisani M, Pompili M, Boriani S: "Artrodesi lombare intersomatica mediante cunei di carbonio - ramps" *Ospedali della Vita* 2001;1,15-20.
18. Tigani D, Ferrari D, Treantani P, Barbanti Bròdano G, Trentani F: "Patellar height after high tibial osteotomy" *International Orthopaedics* 2001;24,331-334.
19. Gasbarrini, E. Bertoldi, S. Bandiera, L. Mirabile, M. Cappuccio, G. Barbanti, S. Boriani: Indicazioni e risorse nel trattamento chirurgico delle metastasi ossee. *TUMORI a Journal of Experimental and Clinical Oncology*. Supplement 1 to volume 87, Number 3, S51 may-june 2001.

20. Pascarella R, Bertoldi E, Maresca A, Palumbi P, Barbanti Bròdano G, Boriani S: "Le fratture persottotrocanteriche dell'anziano: trattamento con inchiodamento bloccato" Ortopedia e Traumatologia 2002;XLIV,1,61-65.
21. F. De Iure, G. Scimeca, U. Donati, M. Palmisani, A. Gasbarrini, S. Paderni, D. Gemma, S. Boriani: Fratture e lussazioni del rachide cervicale inferiore: revisione di 72 casi operati presso la Divisione di Ortopedia e Traumatologia dell'Ospedale Maggiore di Bologna. Il Rachide. Italian Journal of Spinal Disorders. Vol. 2-Fasc. 1-Anno 2002
22. M. Palmisani, A. Gasbarrini, G.B. Scimeca, G. Barbanti Bròdano, U. Donati, F. De Iure, L. Mirabile, S. Boriani: Il trattamento chirurgico delle fratture del rachide toracico e lombare nel paziente politraumatizzato. Il Rachide. Italian Journal of Spinal Disorders. Vol. 2-Fasc.1-Anno 2002.
23. G. Barbanti Bròdano, G. Muratori, F. Giardina, S. Bandiera, A. Gasbarrini, F. De Iure, S. Boriani: Artrodesi lombare intersomatica per via posteriore mediante cages in PEEK; Risultati preliminari. G.I.O.T. 2002;28:145-151.
24. S. Bandiera. A. Gasbarrini, F. De Iure, G. Barbanti Brodano, L. Mirabile, E. Bertoldi, M. Cappuccio, S. Boriani: Stadiazione, Terminologia, Trattamento Oncologico dei Tumori Ossei del Rachide REUMATISMO. 2003 ° Vol. 55. N.1 (Suppl.1) – III° Corso di Aggiornamento – Le Urgenze Reumatologiche. Il Dolore Lombare – Bologna, 20-31 maggio 2003 (pag.36)
25. Gasbarrini, L. Mirabile, S. Bandiera, G. Barbanti Brodano, F. De Iure, M. Fravisini, S. Boriani: La Patologia Lombare: Indicazioni al Trattamento Videoassistito. REUMATISMO. 2003 ° Vol. 55 ° N.1 (Suppl. 1) – III° Corso di Aggiornamento – Le Urgenze Reumatologiche. Il Dolore Lombare – Bologna, 20-31 maggio 2003 (pag.91)
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28. M. Palmisani, F. De Iure, A.Gasbarrini, G. Barbanti Brodano, S. Boriani. Fratture vertebrali toraciche e lombari: trattamento. Aggiorn Club Ital Osteosint (2004) 10:17-23 Springer – Verlag 2004.
29. G. Barbanti Bròdano, A. Gasbarrini, S. Bandiera, G.B. Scimeca, F. De Iure, M. Palmisani, U. Donati, S. Boriani. Intervento più leggero per le fratture vertebrali. OdV n°4/ottobre 2004.
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33. A.Gasbarrini, M. Russo, L.Mirabile, G. Barbanti Bròdano, S. Bandiera, P. Orlandi, M. Capuccio, A. Maresca, S. Boriani. L'ago-biopsia TC-guidata nelle lesioni rachidee: indicazioni e tecnica. G.I.O.T 2005;31:61-67.
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37. A.Gasbarrini, S. Bandiera, L. Mirabile, M. Cappuccio, S. Terzi, G. Barbanti Brodano, L. Boriani, S. Boriani. Vertebral Osteomyelitis: Diagnostic and Therapeutic Algorithm. Journal of Orthopaedics and Traumatology. Volume 7- Supplement 1- November 2006. S5-S6
38. G. Barbanti Brodano, A. Gasbarrini, F. De Iure, L. Mirabile, L. Boriani, M. Palmisani, S. Bandiera, G.B. Scimeca, S. Boriani. Minimally invasive percutaneous osteosynthesis in the treatment of adult and old patient spine fractures. Journal of Orthopaedics and Traumatology. Volume 7- Supplement 1- November 2006. S6
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To Multiple Myeloma and Chronic Myeloid Leukemia Treated With Vertebropasty. Two Case Reports and Revision of the Literature. Journal of Orthopaedics and Traumatology. Volume 7- Supplement 1- November 2006. S25

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46. G. Barbanti Brodano, L. Mirabile, L. Boriani, E. Magni, R. Piperno, S. Boriani. Multidisciplinary diagnostic-therapeutic approach to the “failed low-back syndrome”. Journal of Orthopaedics and Traumatology. Volume 7- Supplement 1- November 2006. S59
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BOOKS CHAPTER

Year	Description
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2018	Riccardo Ghermandi, Gisberto Evangelisti, Marco Girolami, Valerio Pipola, Stefano Bandiera, Giovanni Barbanti Brodano, Cristiana Griffoni, Giuseppe Tedesco, Silvia Terzi, Alessandro Gasbarrini “Management of Metastases to the Spine and Sacrum” in <i>Management of Bone Metastases</i> , pagg. 73-92, ed. Springer.

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Firma

