

# Curriculum Vitae

## Elisa Pala, M.D. Ph.D.

<b>Date of birth</b>	31/08/1983
<b>Title</b>	Orthopedic Surgeon, Department of Orthopedics and Orthopedic Oncology, University of Padova

### EDUCATION AND WORK EXPERIENCE

<b>Title of qualification awarded</b>	<p>Medical Degree at University of Bologna 18/09/2008 with 110/110 cum laude.</p> <p>Board of Orthopedics at Istituto Ortopedico Rizzoli, University of Bologna, 8/07/2014 with 110/110 cum laude.</p> <p>Ph. D. in Oncology 11/05/2015.</p> <p>From June 2015 to December 2016 she worked as orthopedics and traumatology surgeon at Department of Orthopedics and Traumatology, Ospedale Infermi, Rimini, Italy.</p> <p>Since December 2016 she works at Department of Orthopedics and Orthopedic Oncology, University of Padova, Italy.</p>
<b>Work experiences</b>	<p>From October 2014 to June 2015 Researcher at University of Bologna, Dept. of Scienze Biomediche e Neuromotorie, working as staff surgeon at the Istituto Ortopedico Rizzoli.</p> <p>From June 2015 to December 2016 Orthopaedic Surgeon at Infermi Hospital, Rimini, Italy.</p> <p>Since December 2016 Orthopedic Surgeon, Department of Orthopedics and Orthopedic Oncology, University of Padova.</p> <p>Surgical Activity: she performed more than 600 surgical procedures in orthopedics, as primary or assistant surgeon.</p>
<b>Awards</b>	<p>SIOT Award 2011, Rimini with the paper: “Distal femur reconstruction with modular prostheses: analysis of survival of implants”.</p> <p>EFORT Award for the Best paper June 2012, Berlin with the paper “Post radiation sarcoma: A single institutional experience on 52 cases”.</p>
<b>Teaching activities</b>	<p>COURSE TEMAS PUNTUALES DE TRAUMATOLOGIA. Caracas, Venezuela, 21-22 Febbraio 2013.</p>

Patologie oncologiche muscolo scheletriche trattate in 2° Clinica. Docente E. Pala. 05/02/2015 Istituto Ortopedico Rizzoli, Bologna.

Corso di perfezionamento in anatomia clinica dell'apparato muscolo-scheletrico anca ginocchio. 15-19 Maggio 2018. Padova.

Teacher at MOC (Musculo-Skeletal Oncology Course) 2017

Teacher at MOC (Musculo-Skeletal Oncology Course) 2018

Teacher at MOC (Musculo-Skeletal Oncology Course) 2019

1st Musculoskeletal Oncology Course Sarajevo - Dec 17-18, 2019 Sarajevo.

Teacher at 4<sup>th</sup> MOC (Musculo-Skeletal Oncology Course) 11-12 November 2021

### Scientific Activities

**Publications:** She is the author of 52 scientific papers on National or International Journals. She is the author of more than 400 abstract for congress or meetings.

Total citation 2248, H-index 27, i10-index 36.

**Congresses and Meetings:** She attended more than 70 National and International Meetings. She has been a speaker or lecturer in more than 30 National or International Congresses or Scientific Meetings.

**Reviewer for the following Journals:** European Journal of Orthopaedic Surgery & Traumatology, EJOST.

**Society Membership:** Società Italiana di Ortopedia e Traumatologia (SIOT), International Society Of Limb Salvage (ISOLS) since 2017, Co-Chair of ISOLS young member's initiative since 2018, CIOSM (Club Italiano Oncologia Muscolo Scheletrica), EMSOS (European Musculo Skeletal Oncology Society) since 2019

### Collaboration in textbooks

La riabilitazione dei pazienti operati per neoplasie primitive dell'osso. 1a edizione, 2017. ISBN: 978-88-97162-62-9. Autori: Maria Grazia Benedetti, Alessandro Zati, Elisabetta Mariani, Pietro Ruggieri. Con la collaborazione di: Teresa Calabrò, Mattia Morri, Elisa Pala, Alessandro Valent.

La protesizzazione nelle neoplasie primitive dell'anca. Le protesi complesse d'anca. Primo impianto. Le protesi complesse d'anca. S. Candiottio-P. Ruggieri. Timeo Editore 2022

La protesizzazione delle lesioni secondarie dell'anca. Le protesi complesse d'anca. Primo impianto. Le protesi complesse d'anca. S. Candiottio-P. Ruggieri. Timeo Editore 2022

<b>Clinical and/or Scientific interests</b>	<b>Main Fields of Research:</b> Musculoskeletal Oncology, Reconstructive Surgery, Prostheses in Musculoskeletal Oncology, Traumatology
<b>Publications</b>	<ol style="list-style-type: none"> <li>1. RUGGIERI P, ANGELINI A, MONTALTI M, PALA E, CALABRÒ T, USSIA G, ABATI CN, MERCURI M. "Tumours and tumour-like lesions of the hip in the paediatric age: a review of the Rizzoli experience." <i>Hi Hip Int.</i> 2009 Jan-Mar;19 Suppl 6:S35-45.</li> <li>2. RUGGIERI P, ANGELINI A, ERRANI C, PICCIOLI A, VALENCIA JD, ROMANTINI M, DRAGO G, FERRARI C, PALA E, MERCURI M. "Indicazioni chirurgiche nelle localizzazioni scheletriche delle malattie emolinfoproliferative." <i>GIOT</i>, XXXVI (1): 43-49.</li> <li>3. RUGGIERI P, BOSCO G, PALA E, ERRANI C, MERCURI M."Local recurrence, survival and function after total femur resection and megaprosthesis reconstruction for bone sarcomas." <i>Clin Orthop Relat Res.</i> 2010 Nov; 468(11): 2860-6.</li> <li>4. RUGGIERI P, MONTALTI M, PALA E, ANGELINI A, CALABRÒ T, ERRANI C, MERCURI M."Clinically significant thromboembolic disease in orthopedic oncology: an analysis of 986 patients treated with low-molecular-weight heparin." <i>J Surg Oncol.</i> 2010 Oct 1;102(5):375-9.</li> <li>5. RUGGIERI P, MAVROGENIS AF, CASADEI R, ERRANI C, ANGELINI A, CALABRÒ T, PALA E, MERCURI M."Protocol of surgical treatment of long bone pathological fractures." <i>Injury.</i> 2010 Nov; 41(11):1161-7. Epub 2010 Oct 14.</li> <li>6. HENDERSON ER, GROUNDLAND JS, PALA E, DENNIS JA, WOOTEN R, CHEONG D, WINDHAGER R, KOTZ RI, MERCURI M, FUNOVICS PT, HORNICEK FJ, TEMPLE HT, RUGGIERI P, LETSON GD."Failure mode classification for tumor endoprostheses: retrospective review of five institutions and a literature review." <i>J Bone Joint Surg. Am.</i> 2011 Mar 2; 93(5): 418-29. Review.</li> <li>7. MAVROGENIS AF, PALA E, ROMANTINI M, GUERRA G, ROMAGNOLI C, MACCAURO G, RUGGIERI P. "Side effects of radiation in Musculoskeletal Oncology: clinical evaluation of radiation-induced fractures" <i>International Journal of Immunopathology and Pharmacology</i>, March 2011, vol. 24 no.2 (S), 29-37</li> <li>8. PALUMBO BT, HENDERSON ER, GROUNDLAND JS, CHEONG D, PALA E, LETSON GD, RUGGIERI P."Advances in segmental endoprosthetic reconstruction for extremity tumors: a review of contemporary design and techniques." <i>Cancer Control.</i> 2011 Jul; 18(3): 160-170.</li> <li>9. MAVROGENIS AF, PALA E, ROMAGNOLI C, ROMANTINI M,</li> </ol>

- CALABRÒ T, RUGGIERI P. "Survival analysis of patients with femoral metastases." *J. Surg. Oncol.* 2011, Aug 3. doi: 10.1002/jso.22061.
10. RUGGIERI P, MAVROGENIS AF, PALA E, MAGDY AM, MERCURI M. "Long Term Results of fixed-hinge megaprotheses in limb salvage for malignancy." *The knee*, 2012, vol. 19(5), p. 543-549, ISSN: 0968-0160, doi: 10.1016/j.knee.2011.08.003
  11. RUGGIERI P, ANGELINI A, PALA E, COLANGELI M, TOSCANO A, PICCIOLI A, MANFRINI M, MERCURI M. "Nuove frontiere nel trattamento chirurgico delle lesioni neoplastiche del sistema muscolo-scheletriche nel paziente pediatrico." *Lo Scalpello* (2011) 25: 201-207.
  12. MAVROGENIS AF, PAPAGELOPOULOS PJ, COLL-MESA L, PALA E, GUERRA G, RUGGIERI P."Infected tumor prostheses." *Orthopaedics*. 2011 Dec 1; 34(12): 991-8
  13. MAVROGENIS AF, ANGELINI A, PALA E, CALABRÒ T, BIANCHI G, CASADEI R, RUGGIERI P. "Radiation-induced sarcomas." *J. Long Term Eff. Med. Implants*. 2011, 21(3): 233-40.
  14. MAVROGENIS AF, PALA E, GUERRA G, RUGGIERI P."Post-radiation sarcomas. Clinical outcome of 52 Patients." *J Surg Oncol*. 2011 Oct 19.
  15. RUGGIERI P, ANGELINI A, PALA E, MERCURI M. "Infections in surgery of primary tumors of the sacrum." *Spine (Phile Pa 1976)* 2012 Mar 1; 37(5):420-8.
  16. MAVROGENIS AF, PAPAGELOPOULOS PJ, COLL-MESA L PALA E, COLANGELI M, MANFRINI M, RUGGIERI P."Expandable tumor prostheses in children." *J BUON*. 2012 Jan-Mar; 17(1): 9-15.
  17. MAVROGENIS AF, ANGELINI A, PALA E, SAKELLARIOU VI, RUGGIERI P, PAPAGELOPOULOS PJ. "Reconstruction of the extensor mechanism after major knee resection." *Orthopaedics*. 2012 may 1; 35(5):e672-80.
  18. ANGELINI A, GUERRA G, MAVROGENIS AF, PALA E, PICCI P, RUGGIERI P. "Clinical outcome of central conventional chondrosarcoma." *J surg Oncol*. 2012 May 30. vol. 106(8), p. 929-937.
  19. MAVROGENIS AF, PALA E, ANGELINI A, FERRARO A, RUGGIERI P. "Proximal tibial resections and reconstructions: Clinical out come of 225 patients." *J Surg Oncol*. 2012 jul 17.
  20. MAVROGENIS AF, ANGELINI A, PALA E, ZINZANI P, RUGGIERI P.

“The role of surgery for haematologic neoplasms of bone.” *Acta Orthop Belg.* 2012 Jun;78(3):382-92.

21. RUGGIERI P, MAVROGENIS AF, PALA E, ROMANTINI M, MANFRINI M, MERCURI M. “Outcome of Expandable Prostheses in Children.” *J Pediatr Orthop.* 2013 Apr-May;33(3):244-253.
22. HENDERSON ER, PALA E, ANGELINI A, RIMONDI E, RUGGIERI P. “Dedifferentiated peripheral chondrosarcoma: a review of radiologic characteristics.” *Sarcoma.* 2013; 2013:505321.
23. PALA E, MAVROGENIS AF, ANGELINI A, HENDERSON ER, LETSON DG, RUGGIERI P. “Cemented versus cementless endoprostheses for lower limb salvage surgery.” *J BUON.* 2013 Apr-Jun;18(2):496-503
24. PALA E, HENDERSON ER, CALABRÒ T, ANGELINI A, ABATI CN, TROVARELLI G, RUGGIERI P. “Survival of current production tumor endoprostheses: Complications, functional results, and a comparative statistical analysis.” *J Surg Oncol.* 2013 Sep 4.
25. DI GENNARO GL, PALA E, DONZELLI O. “Management of Genu Varum/Valgum in Shwachman-Diamond Syndrome: A Report of Two Cases.” *J Med Diagn Meth* 2: 126. doi:10.4172/2168-9784.1000126
26. GHERMANDI R, PALA E, GAMBAROTTI M, COLANGELI S, BORIANI S. “Myoepithelioma of the spine: first case in the literature.” *Eur Rev Med Pharmacol Sci.* 2014 Apr;18(1 Suppl):66-71.
27. PALA E, TROVARELLI G, CALABRÒ T, ANGELINI A, ABATI CN, RUGGIERI P. “Survival of Modern Knee Tumor Megaprotheses: Failures, Functional Results, and a Comparative Statistical Analysis.” *Clin Orthop Relat Res.* 2014 May 30.
28. ANGELINI A, CALABRO’ T, PALA E, TROVARELLI G, MARALDI M, RUGGIERI P. “Resection and reconstruction of pelvic bone tumors.” *Orthopedics.* 2015 Feb 1;38(2):87-93.
29. MAVROGENIS AF, PALA E, ANGELINI A, CALABRO’ T, ROMAGNOLI C, ROMANTINI M, DRAGO G, RUGGIERI P. “Infected Prostheses after Lower-Extremity Bone Tumor Resection: Clinical Outcomes of 100 Patients.” *Surg Infect (Larchmt).* 2015 Mar 26.
30. MAVROGENIS AF, ANGELINI A, VOTTIS C, PALA E, CALABRÒ T, PAPAGELOPOULOS PJ, RUGGIERI P. “Modern Palliative Treatments for Metastatic Bone Disease: Awareness of Merits, Demerits and Guidance.” *Clin J Pain.* 2015 May 15.

31. ANGELINI A, PALA E, CALABRÒ T, MARALDI M, RUGGIERI P. "Prognostic factors in surgical resection of sacral chordoma." *J Surg Oncol*. 2015 Aug;112(4):344-51.
32. CALABRO' T, VAN ROOYEN R, PIRAINO I, PALA E, TROVARELLI G, PANAGOPOULOS GN, MEGALOIKONOMOS PD, ANGELINI A, MAVROGENIS AF, RUGGIERI P. "Reconstruction of the proximal femur with a modular resection prosthesis." *Eur J Orthop Surg Traumatol*. 2016 May;26(4):415-21.
33. PALA E, TRONO M, BITONITI A, LUCIDI G. "Hip hemiarthroplasty for femur neck fractures: minimally invasive direct anterior approach versus postero-lateral approach." *Eur J Orthop Surg Traumatol*. 2016 May;26(4):423-7.
34. PALA E, TROVARELLI G, ANGELINI A, RUGGIERI P. "Distal femur reconstruction with modular prostheses: a single Institution analysis of implant survival comparing fixed versus rotating hinge knee prostheses." *Int Orthop*. 2016 Oct;40(10):2171-2180. Epub 2016 Jun 4.
35. MAVROGENIS AF, ANGELINI A, PANAGOPOULOS GN, PALA E, CALABRÒ T, IGOUMENOU VG, KATZOURAKI G, MEGALOIKONOMOS PD, PNEUMATICOS SG, PAPAGELOPOULOS PJ, RUGGIERI P. Aggressive Chordomas: Clinical Outcome of 13 Patients. *Orthopedics*. 2017 Mar 1;40(2):e248-e254. Epub 2016 Nov 14.
36. HENDERSON ER, KEENEY BJ, PALA E, FUNOVICS PT, EWARD WC, GROUNDLAND JS, EHRLICHMAN LK, PUCHNER SS, BRIGMAN BE, READY JE, TEMPLE HT, RUGGIERI P, WINDHAGER R, LETSON GD, HORNICEK FJ. The stability of the hip after the use of a proximal femoral endoprosthesis for oncological indications: analysis of variables relating to the patient and the surgical technique. *Bone Joint J*. 2017 Apr;99-B(4):531-537.
37. PALA E, TROVARELLI G, ANGELINI A, MARALDI M, BERIZZI A, RUGGIERI P. Megaprosthesis of the knee in tumor and revision surgery. *Acta Biomed* 2017; Vol. 88, Supplement 2: 129-138.
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39. ANGELINI A., GUERRERI A., TROVARELLI G., PALA E., BERIZZI A., BIZ C., SPEROTTO P., RUGGIERI P. L'uso delle megaprotesi nella chirurgia di revisione dell'arto inferiore. *Lo Scalpello* (2017) 31:282-288.
40. PALA E , ANGELINI A, TROVARELLI G, BERIZZI A, RUGGIERI P.

Current mega-prostheses options. *Current Orthopedic Practice* 2017. Vol 28, N 6, pag 520-523.

41. ANGELINI A, TROVARELLI G, BERIZZI A, PALA A, BREDA A, MARALDI M, RUGGIERI P. Treatment of pathologic fractures of the proximal femur. *Injury*. 2018 Nov;49 Suppl 3:S77-S83.
42. TROVARELLI G, ANGELINI A, PALA E, CAPPELLARI A, BREDA A, RUGGIERI P. Infection in orthopaedic oncology: crucial problem in modern reconstructive techniques. *European Review for Medical and Pharmacological Sciences* 2019; 23(2 Suppl.): 271-278
43. ANGELINI A, TROVARELLI G, BERIZZI A, PALA E, BREDA A, RUGGIERI P. Three-dimension-printed custom-made prosthetic reconstructions: from revision surgery to oncologic reconstructions. *Int Orthop*. 2019 Jan;43(1):123-132.
44. TROVARELLI G, CAPPELLARI A, ANGELINI A, PALA E, RUGGIERI P. What Is the Survival and Function of Modular Reverse Total Shoulder Prostheses in Patients Undergoing Tumor Resections in Whom an Innervated Deltoid Muscle Can Be Preserved?. *Clin Orthop Relat Res*. 2019 Nov;477(11):2495-2507.
45. Trovarelli G., Pala E., Cappellari A., Angelini A., Ruggieri P. (2019). Proximal femoral reconstructions: A European "italian" experience. A case series. *CURRENT ORTHOPAEDIC PRACTICE*, ISSN: 1940-7041, doi: 10.1097/BCO.0000000000000813
46. TROVARELLI G, CASTANEDA-MARTINEZ AI, PALA E, CAPPELLARI A, ANGELINI A, BERZZI A, RUGGIERI P. Image-Guided Percutaneous Biopsy for the Diagnosis of Musculoskeletal Tumors: An Analysis of 698 Cases and a Literature Review. *Surgery Case Reports* doi:10.31487/j.JSCR.2020.03.03.
47. HENDERSON ER, KEENEY BJ, HUSSON EG, BERNTHAL NM, JI T, PALA, FUNOVICS PT, GROUNDLAND JS, LOZANO-CALDERON S, PUCHNER S, ZOLLER SD, RUGGIERI P, WINDHAGER R, GUO W, HORNICEK FJ, LETSON GD, TEMPLE T. Non-mechanical Revision Indications Portend Certain Limb-Salvage Failure Following Total Femoral Replacement. *J Bone Joint Surg Am*. 2020;00:1-10.
48. Benazzo F, Rossi SMP, Maniscalco P, Moretti B, Vaienti E, Ruggieri P, Massè A, Medici A, Formica A, Di Maggio B, Caiaffa V, Mosconi M, Murena L, D'Angelo F, Belluati A, Mazza EL, Rivera F, Castelli A, Ghiara M, Rosolani M, Cioffi R, Pezzella R, Scaravilli G, Bove G, Stissi P, Mazzacane M, Quattrini F, Ciatti C, Trovarelli G, Pala E, Angelini A, Sanna F, Nonne D, Colombelli A, Raggini F, Puzzo A, Canton G, Maritan G, Iuliano A, Randelli P, Solarino G, Moretti L, Vicenti G, Garofalo N, Nappi V, Ripanti S, Chinni C, Pogliacomi F, Visigalli A, Bini N, Aprato A, Perticarini L (2020). The

orthopaedic and traumatology scenario during Covid-19 outbreak in Italy: chronicles of a silent war. . INTERNATIONAL ORTHOPAEDICS, vol. 44, p. 1453-1459, ISSN: 0341-2695, doi: 10.1007/s00264-020-04637-3

49. Cappellari A, Trovarelli G, Crimi A, Pala E, Angelini A, Berizzi A, Ruggieri P. New concepts in the surgical treatment of actual and impending pathological fractures in metastatic disease. *Injury*. 2020 Nov 11;S0020-1383(20)30952-9. doi: 10.1016/j.injury.2020.11.025.
50. Maso G, Pala E, Berizzi A, Ruggieri P (2020). A rare case of anterior shoulder dislocation in 1-year- and 10-month-old toddler: case report and literature review. *ARCHIVES OF ORTHOPAEDIC AND TRAUMA SURGERY*, ISSN: 0936-8051, doi: 10.1007/s00402-020-03536-x
51. Ruggieri P, Trovarelli G, Angelini A, Pala E, Berizzi A, Donato D (2020). COVID-19 strategy in organizing and planning orthopedic surgery in a major orthopedic referral center in an area of Italy severely affected by the pandemic: experience of the Department of Orthopedics, University of Padova. . *JOURNAL OF ORTHOPAEDIC SURGERY AND RESEARCH*, vol. 15, ISSN: 1749-799X, doi: 10.1186/s13018-020-01740-4.

Pala E, Trovarelli G, Ippolito V, Berizzi A, Ruggieri P. A long-term experience with Mutars tumor megaprotheses: analysis of 187 cases. *Eur J Trauma Emerg Surg*. 2021 Nov 2. doi: 10.1007/s00068-021-01809-7.