

100 Years of History of the Department of Orthopaedics and Traumatology at Hospital Italiano de Buenos Aires

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ABSTRACT

Introduction: In 2026, the Department of Orthopaedics and Traumatology of Hospital Italiano de Buenos Aires celebrates 100 years since its foundation. From its origins, its development was linked to the orthopaedic school of the Rizzoli Institute in Bologna and to figures such as Vittorio Putti, José Valls, and Carlos E. Ottolenghi. **Objective:** To describe the main historical, clinical, educational, scientific, and technological milestones that shaped the evolution of the Department during its first 100 years. **Historical Overview:** Since its establishment in 1926, the Department has undergone sustained growth and reached several milestones that contributed to the development of the specialty in Argentina and the region. These include the establishment of the Bone Bank and the first massive bone transplantation in 1948; the creation of Argentina's first residency program in Orthopaedics and Traumatology in 1964; the first Charnley total hip arthroplasty in the Americas in 1967; the development of bone allograft reconstruction techniques; and the progressive introduction of arthroscopy, surgical navigation, and robotic surgery. The Department also consolidated its academic and scientific activity and its participation in international networks. **Conclusions:** Over the course of a century, the Department has made sustained contributions to the development of the specialty through patient care, professional training, research, and the adoption of surgical and technological innovations.

Keywords: Orthopaedics; traumatology; history of medicine; medical education; Hospital Italiano de Buenos Aires.

Level of Evidence: Not applicable.

100 años de Historia del Servicio de Ortopedia y Traumatología del Hospital Italiano de Buenos Aires

RESUMEN

Introducción: En 2026, el Servicio de Ortopedia y Traumatología del Hospital Italiano de Buenos Aires celebra 100 años desde su creación. Su desarrollo estuvo vinculado desde sus orígenes con la escuela ortopédica del Instituto Rizzoli de Bologna y con figuras, como Vittorio Putti, José Valls y Carlos E. Ottolenghi. **Objetivo:** Describir los principales hitos históricos, asistenciales, docentes, científicos y tecnológicos que marcaron la evolución del Servicio durante sus primeros 100 años. **Desarrollo:** Desde su creación en 1926, el Servicio experimentó un crecimiento sostenido y alcanzó diversos hitos relevantes para el desarrollo de la especialidad en la Argentina y la región. Entre ellos, se destacan la creación del Banco de Huesos y la realización del primer trasplante óseo masivo en 1948; la creación de la primera residencia de Ortopedia y Traumatología del país en 1964; la primera artroplastia de cadera tipo Charnley en América, en 1967; el desarrollo de técnicas de reconstrucción con aloinjertos óseos, y la incorporación progresiva de la artroscopia, la navegación quirúrgica y la cirugía robótica. Asimismo, consolidó su actividad académica y científica, y su participación en redes internacionales. **Conclusiones:** A lo largo de un siglo, el Servicio ha contribuido sostenidamente al desarrollo de la especialidad mediante la asistencia, la formación profesional, la investigación y la incorporación de innovaciones quirúrgicas y tecnológicas.

Palabras clave: Ortopedia; traumatología; historia de la medicina; educación médica; Hospital Italiano de Buenos Aires.

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The history of the Department of Orthopedics and Traumatology at Hospital Italiano de Buenos Aires dates back to 1926. That year, the renowned Italian surgeon Vittorio Putti, the father of modern orthopedics and a central figure in the orthopedic school of the Rizzoli Institute in Bologna, entrusted Dr. José Valls with establishing an orthopedic department at Hospital Italiano following a visit to the Rizzoli Institute. In August, Dr. Carlos E. Ottolenghi joined the hospital. He would become a pivotal figure and the driving force behind the development of modern orthopedics at our institution.¹

In 1928, Dr. Ottolenghi and other Latin American trainees continued their training in Bologna, strengthening their academic ties with the Rizzoli Institute tradition (Figure 1). This influence would leave a lasting mark on the Department's identity. From the outset, its work rested on surgical excellence, structured specialist training, and the advancement of scientific knowledge.



Figure 1. Dr. Vittorio Putti's pupils at the Rizzoli Institute in Bologna, circa 1929. From left to right: Drs. Ottolenghi, Valls, Allende, Putti, Otaño, and Dellepiane Rawson.

In 1944, Dr. Carlos E. Ottolenghi was appointed Head of the Department, beginning a period of institutional consolidation and growth. Under his leadership, the Department became a referral center for the treatment of musculoskeletal disorders.

A major milestone came in 1948 with the establishment of the Bone Bank and the first massive bone transplantation procedure. This pioneering advance placed Hospital Italiano at the forefront of bone reconstruction in the region (Figure 2).

Growing demand for care led to the opening of a separate 180-bed ward in 1956, dedicated exclusively to patients with orthopedic conditions and traumatic injuries. The new facility allowed the Department to expand its clinical and surgical work and strengthen professional training.

In 1964, Argentine orthopedics reached a historic milestone with the creation of the country's first residency program in orthopedics and traumatology. This innovative model of surgical training would shape the specialty for decades to come. Over the past 25 years, the Department has trained 180 residents and 160 fellows.

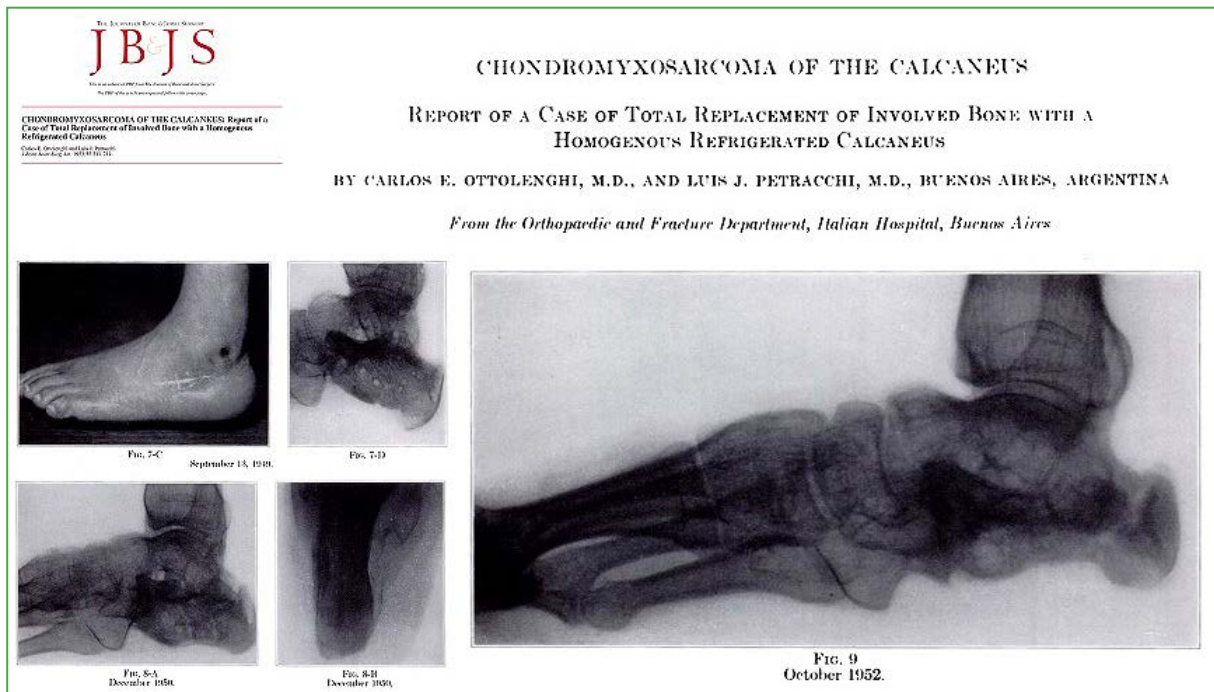


Figure 2. First massive bone transplantation performed by Drs. Ottolenghi and Petracchi in 1948.²

The Department's commitment to innovation continued through surgical advances with a lasting impact. In 1967, the first Charnley hip replacement in the Americas was performed, introducing a technique that would revolutionize reconstructive surgery in the region (**Figure 3**).



Figure 3. First Charnley hip replacement in the Americas, performed by Drs. Luis Petracchi and Rodolfo Pusso.

Following Dr. Ottolenghi's appointment as Head of the Department, the hospital hosted courses attended by leading international figures in orthopedics, including Professor Vittorio Putti himself in 1930, as well as Drs. Böhler, Trueta, Merle d'Aubigné, Scaglietti, Fineschi, and others. These activities helped establish Hospital Italiano as a leading academic center (Figure 4).



Figure 4. Dr. Ottolenghi and Dr. Robert Merle d'Aubigné in the Department of Orthopedics auditorium during a course in 1970.

The 1970s brought important developments. In 1970, the Scoliosis Center was established, and Dr. Vázquez Ferro performed Argentina's first knee replacement. In 1972, he also developed the treatment of shaft fractures with the Küntscher intramedullary nail in Argentina, contributing to the advancement of modern trauma surgery.

This spirit of innovation continued in 1976 with the first knee arthroscopy, introducing a minimally invasive technique that would transform the treatment of many joint disorders.

In 1987, the first hip impaction bone grafting procedure using allograft was performed. This complex technique allowed bone defects to be reconstructed during revision surgery.³

Technological progress continued in 1995 with the introduction of a laminar airflow operating room, improving safety standards with the aim of reducing infection risk in joint replacement, oncologic, and spinal surgery.

Between 1999 and 2007, Dr. Luis Muscolo led the Department, strengthening the international standing of its musculoskeletal oncology program and expanding its academic and scientific activities.

The following decade brought important new technologies. In 2010, surgical navigation was introduced for musculoskeletal tumors, improving the precision of oncologic resection. In 2012, a new surgical suite opened, expanding capacity to eight state-of-the-art operating rooms and modernizing the Department's infrastructure.

In 2020, the Department was invited to join the *International Society of Orthopaedic Centers* (ISOC), becoming part of a worldwide network of 25 centers of excellence.

In 2021, the first robot-assisted total knee replacement was performed, introducing advanced technology to optimize precision in reconstructive surgery.

The institution continued to grow with the opening of new premises for the Department of Orthopedics in 2024: a modern, 500-m² space designed to support the specialty's expanding clinical, educational, and scientific activities. Over the past 10 years, physicians in our Department have published more than 500 papers indexed in PubMed, many of which have had substantial scientific influence (Table).

Table. Most influential publications from the Department of Orthopedics and Traumatology at Hospital Italiano de Buenos Aires.

Author	Year	Journal	Study design	Level of evidence	Title	Key contribution	Citations*
Costa-Paz et al. ¹	2001	<i>Arthroscopy</i>	Case series	IV	Magnetic resonance imaging follow-up study of bone bruises associated with anterior cruciate ligament ruptures	Pioneering study describing the evolution of bone bruises over time in ACL injuries	260
Buttaró et al. ²	2007	<i>J Bone Joint Surg Am</i>	Case series	IV	Locking compression plate fixation of Vancouver type-B1 periprosthetic femoral fractures	Established locking plate fixation as an effective, reproducible strategy for treating type B1 periprosthetic fractures, influencing modern surgical practice	255
Muscolo et al. ³	2004	<i>Clin Orthop Relat Res</i>	Case series	IV	Intercalary femur and tibia segmental allografts provide an acceptable alternative in reconstructing tumor resections	Demonstrated that intercalary allografts are a viable biological option for reconstruction after tumor resection, with acceptable functional outcomes and survival	230
Muscolo et al. ⁴	2005	<i>J Bone Joint Surg Am</i>	Case series	IV	Use of distal femoral osteoarticular allografts in limb salvage surgery	Defined the technique and outcomes of distal femoral osteoarticular allografting, establishing its role in limb salvage surgery	215
Muscolo et al. ⁵	2005	<i>Orthop Clin North Am</i>	Narrative review	V	Massive allograft use in orthopedic oncology	Conceptual review providing a systematic account of the indications, techniques, and complications of massive allograft use	215
Buttaró et al. ⁶	2005	<i>J Bone Joint Surg Br</i>	Case series	IV	Vancomycin-supplemented impacted bone allografts in infected hip arthroplasty: two-stage revision results	Described antibiotic-supplemented impaction allografting in revision hip arthroplasty for infection, with good results in infection control through a two-stage approach and in bone reconstruction	160
Aponte-Tinao et al. ⁷	2012	<i>Clin Orthop Relat Res</i>	Case series	IV	Intercalary femur allografts are an acceptable alternative after tumor resection	Provided long-term results validating the use of intercalary femoral allografts and supporting their indication for biological reconstruction	165

(Continued)

Table. Cont.

Muscolo et al. ⁸	2004	<i>J Bone Joint Surg Am</i>	Case series	IV	Partial epiphyseal preservation and intercalary allograft reconstruction in high-grade metaphyseal osteosarcoma of the knee	Introduced the concept of epiphyseal preservation in osteosarcoma, allowing joint preservation and improved functional outcomes without compromising oncologic control	160
Aponte-Tinao et al. ⁹	2015	<i>Clin Orthop Relat Res</i>	Case series	IV	Survival, recurrence, and function after epiphyseal preservation and allograft reconstruction in osteosarcoma of the knee	Confirmed the oncologic safety and functional benefits of epiphyseal preservation combined with allograft reconstruction in larger series	150
Buttaro et al. ¹⁰	2008	<i>Clin Orthop Relat Res</i>	Case series	IV	Acetabular revision with metal mesh, impaction bone grafting, and a cemented cup	Described a reproducible technique for complex acetabular reconstruction using metal mesh and impaction bone grafting, widely adopted in revision arthroplasty	135

* Citation counts are approximate and based on Google Scholar/Scopus (2025–2026).

- Costa-Paz M, Muscolo DL, Ayerza MA, Makino A, Aponte-Tinao L. Magnetic resonance imaging follow-up study of bone bruises associated with anterior cruciate ligament ruptures. *Arthroscopy* 2001;17(5):445-9. PMID: 11337716
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This extensive academic and scientific work has also been consistently represented in the *Revista de la Asociación Argentina de Ortopedia y Traumatología*. Over the past two years, members of the Department's various divisions have regularly contributed original research, case reports, review articles, and other publications. Their contributions reflect the breadth of our scientific output and reaffirm a longstanding relationship with the Association and its journal that remains strong today.

In 2025, the DITTO unit (*Desarrollo, Innovación y Tecnología en Traumatología y Ortopedia*—Development, Innovation, and Technology in Traumatology and Orthopedics) was established as a cross-departmental initiative dedicated to technological development and innovation. Its work incorporates artificial intelligence, specialized software development, and the creation of innovative medical devices.

The Department currently comprises 174 professionals: 31 staff physicians, 50 residents, 16 fellows, and 77 affiliated physicians working at the main hospital, the San Justo site, and peripheral centers.

In 2026, the Department celebrates its centenary, marking a century of clinical and surgical excellence, the training of generations of specialists, and continuous innovation. As part of the celebrations, the Dr. Luis Muscolo Auditorium opened on March 3 as a space for education and academic exchange, carrying forward the teaching tradition that has defined the Department since its beginnings. During the Association's upcoming Congress, we will hold a Department Alumni Course on November 19, with all Congress registrants invited to attend.

Over these 100 years, the Department of Orthopedics and Traumatology at Hospital Italiano de Buenos Aires has trained hundreds of specialists, developed significant surgical advances, and contributed to the growth of orthopedics in Argentina and Latin America. Its history is that of a surgical school that has brought together tradition, innovation, and a commitment to training future generations.

Conflicts of interest: The author declare no conflicts of interest.

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