

Virtual Meet on **MEDICAL ONCOLOGY AND TUMOUR CELLS**

July 28, 2021 | Webinar

Immunologic reactions to bone and articular implantsAdrian Alexandru Dorin Silași¹, Cristian Paul Dan & Gheorghe Tomoaia², Simona Irina Dan³, Gheorghe Tomoaia⁴¹Department of Medical Oncology, The Oncology Institute Prof. Dr. Ion²Department of Orthopedics and Traumatology, Iuliu Hatieganu University of Medicine and Pharmacy, 47 Gen. Traian Mosoiu Street, 400132, Cluj-Napoca, Romania³Department of Physical Medicine and Rehabilitation, Clinical Recovery Hospital Cluj-Napoca, Strada Viilor nr 46-50, Cluj-Napoca, 400437, Romania Chiricuță⁴Cluj-Napoca, 34-36 Republicii Street, 400015, Cluj-Napoca, Romania⁵Academy of Romanian Scientists, Splaiul Independenței, nr. 54, Bucharest, Romania

Statement of the Problem: In recent years the number on implantable devices that have been used in orthopedic surgeries has increased exponentially. As the number of people with orthopedic implants has grown, implant failure has become an increasingly important public health issue. While a significant percent of joint implants fails at between 15 and 20 years some authors suggest that one of the main causes is the interaction between the immune system of the host and the material of the implant. **Methodology & Theoretical Orientation:** The search engines used for research comprised of PubMed, Google Scholar and Cochrane Library. **Findings:** This review aims to summarize relevant and recent data on the immune reactions that are taking place at the juxtaposition between the implant and the patient's tissue, the time frame in which these immune reactions take place and some of the factors that can influence this reaction. The immune reactions can be divided into: hyperacute immune reactions (anaphylactic shock), acute reactions, the transition between the acute phase and the chronic phase and last but not least chronic immune reactions to such implants. **Conclusion & Significance:** The research being done with regard to implant-related immunology strives to help in solving the problem of long-term implant failure.

Biography

Cristian Paul Dan is a young orthopedic surgeon specialist with an ongoing education, currently specializing in pediatric orthopedic surgery. His continuous interest and work in the field of implantology has crystallized in the recent published articles. Cristian Paul Dan was aided in this endeavor by Adrian Alexandru Dorin Silași and Simona Irina Dan. Adrian Alexandru Dorin Silași while working in the field of medical oncology has expressed a keen interest in immuno-oncology, interest that has branched out in other fields of immunology as well. Simona Irina Dan while activating in the Department of Physical Medicine and Rehabilitation as medical resident has aided in selecting the articles necessary for the compilation of the research that this team has published. The research was performed under the guidance of the illustrious Prof. Dr. Gheorghe Tomoaia whose extensive research in the field of orthopedic surgery and his vast clinical experience were invaluable for the team. tom.treasure@gmail.com

dancristianpaul@gmail.com
silasialex@yahoo.com