

HUMAN TISSUE DONATION AND TRANSPLANTATION IN THE REPUBLIC OF MOLDOVA

Buga Diana¹, Timbalari Tatiana¹, Romanciuc Grigore¹, Ciubotaru Ludmila¹, Visterniceanu Dorian¹, Cornea Cornelia¹, Farima Marc¹, Ungureanu Alina¹, Nacu Viorel²

¹ Transplant Agency, Chisinau, Republic of Moldova.

² Human Tissue Bank, Chisinau, Republic of Moldova.

Introduction: In recent years, human tissue transplantation has gained increasing importance in modern medicine, expanding both in scope and medical applications. Advances in surgical techniques, improvements in tissue preservation, and growing awareness of donation have contributed to a rise in transplant procedures. However, the availability of tissue grafts remains a critical challenge, particularly in countries with developing transplant infrastructures. This study evaluates the progress, trends, and existing barriers in human tissue donation and transplantation in the Republic of Moldova over the past decade (2015–2024), providing insight into the current situation and potential areas for improvement.

Materials and Methods: This prospective study is based on annual reports from the Human Tissue Bank and medical institutions authorized for tissue procurement and transplantation activities.

Results During the reference period, a total of 838 actual tissue donors were identified. Among them, cadaveric tissue donors accounted for 26% (218), with 26% (56) classified as DBD and 74% (162) as DCD, while living donors constituted 74% (620). The donation rate demonstrated a positive trend, reaching 8.8 donors per million population (PMP) in 2024, despite a sharp decline during the COVID-19 pandemic, when the rate dropped to 3.03 donors PMP in 2020. However, this figure remains well below the European benchmark of approximately 40 deceased donors PMP. The family refusal rate has remained high, reaching 62% in recent years.

Throughout the study period, the following tissues were procured: 376 corneas, 188,679 cm² of skin, 787 musculoskeletal tissue units, and 128 amniotic membrane grafts. The waiting list for corneal transplantation continues to expand, with an insufficient number of available grafts to meet the growing demand. By the end of 2024, the corneal transplant rate stood at 19.6%, with only one corneal graft available for every two patients in need.

Conclusions: The Republic of Moldova has made progress in human tissue transplantation, with an increasing number of donors, but the donation rate remains below the European benchmark. The shortage of corneal and skin grafts persists, with only one cornea available for every two patients in need. To further improve transplant activity, efforts should focus on raising donor awareness, optimizing procurement processes, and enhancing institutional capacities.

Key words: transplantation, human tissue, tissue donors.