

## **The First Robotic-assisted DIEP Flap Breast Reconstruction in Eastern Europe: A National Milestone in Reconstructive Surgery**

Vlad Pieptu<sup>1,2</sup>, Dragoş Viorel Scripcariu<sup>1,3</sup>, Dragoş Pieptu<sup>1</sup>, Daniel Murariu<sup>4</sup>

<sup>1</sup>Grigore T. Popa University of Medicine and Pharmacy, Iaşi, Romania

<sup>2</sup>Department of Plastic Surgery, Regional Institute of Oncology, Iaşi, Romania

<sup>3</sup>Department of Surgery, Regional Institute of Oncology, Iaşi, Romania

<sup>4</sup>University of Hawaii, John A. Burns School of Medicine, Athena Clinic Plastic Surgery, Honolulu, Hawaii, USA

### **Abstract**

This article presents the first robotic-assisted DIEP flap breast reconstruction in Eastern Europe, performed at the Regional Institute of Oncology Iaşi, Romania. A 48-year-old female, three years post-Madden mastectomy, underwent autologous breast reconstruction with a bi-pedicled DIEP flap. The procedure utilized the da Vinci Xi<sup>®</sup> robotic system for precise dissection of the vascular pedicles via a transabdominal preperitoneal approach. Robotic dissection was completed safely, with minimal fascial incisions, and totaling 104 minutes (out of total operative time of 11 hours). The uneventful post-operative course allowed patient discharge on postoperative day 4. This case marks a technological milestone for Romania and demonstrates the feasibility of robotic surgery in autologous breast reconstruction. The successful implementation of this technique opens the door for wider adoption in Eastern Europe, offering the potential for reduced donor site morbidity and improved recovery.

**Keywords:** robotic surgery, DIEP flap, breast reconstruction, microsurgery, Romania