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11<sup>th</sup> International Meeting on General Thoracic Surgery



10<sup>th</sup> International Workshop on Surgical Exploration of the Mediastinum and Systematic Nodal Dissection



5<sup>th</sup> Meeting of the Thoracic Oncology, Thoracic Surgery, Techniques & Transplant, Respiratory Nursing and Respiratory Physiotherapy Areas of the Spanish Society of Pneumology and Thoracic Surgery (SEPAR)



3<sup>rd</sup> Joint Meeting of the Spanish Society of Thoracic Surgery (SECT)



30<sup>th</sup> Congress of the "Asociación Iberoamericana de Cirugía Torácica" AIACI



10<sup>th</sup> International Workshop on Surgical Exploration of the Mediastinum and Systematic Nodal Dissection



## UNCOMMON MUSCLE FLAPS IN CHEST WALL RECONSTRUCTION

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Sarcomas are high-grade malignant tumors that affect bone and soft tissues. These are rare tumors, accounting for only 1% of malignant tumors. Their incidence in the European population is 1-2 cases per 100,000 inhabitants. The survival rate in Europe is below 60% at 5 years.

Sarcomas preferably appear in the limbs, with the majority occurring in the lower extremity, representing 60% of the total. They are less common in the trunk, but they still account for a significant 30% of cases. This results in an average of 8 to 15 cases annually in a national reference center.

These types of tumors often require large tissue resections, which cannot be performed unless proper soft tissue coverage is ensured. In many cases, the possibilities for coverage determine the surgical indication. Traditionally, muscle flaps have been used, either pedicled or as free microvascular flaps, for chest wall reconstructions, involving the use of the latissimus dorsi, pectoralis major, and serratus muscles. With the development of microsurgical techniques and the introduction of perforator flaps since the year 2000, both local and free, the use of traditional muscle flaps has gradually been relegated due to the functional loss they entail. They have now become the ideal salvage option in case of postoperative complications or local tumor recurrences.

Perforator flaps have a cutaneous-fascia-fat structure, which avoids the sacrifice of muscle function. In their local version, they allow coverage of small to medium defects, and in their free version, they allow for the reconstruction of large tissue defects. This presentation outlines these different flaps and their indications.

Moreover, in recent years, the concept of functional reconstruction has been introduced, where the aim is not only structural repair but also the recovery of lost function due to oncologic resection of the chest wall, through the use of functional muscle flaps reinnervated by specific tissue nerve repair.