



## **Giant and Disfiguring Phyllodes Tumor of The Breast in A Jehovah's Witness Patient**

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**How to citation this article:** David Diaz-Perez, Raquel Barriga-Sanchez, Lorenzo Rabadán-Ruiz, <sup>3</sup>Magda Palka-Kotlowska, Julia Camps, Pablo Galindo-Jara, Luis Cabezón-Gutiérrez, “Giant and Disfiguring Phyllodes Tumor of The Breast in A Jehovah's Witness Patient”, IJMACR- September - 2024, Volume – 7, Issue - 5, P. No. 158 – 165.

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**Type of Publication:** Case Report

**Conflicts of Interest:** Nil

### **Abstract**

Breast tumors are very common but the histological variant of phyllodes tumor is rare. They can be distinguished into benign, borderline and malignant. Also, depending on their size, they can be giant when have >10cm, which, in the specific case of phyllodes, present hemorrhagic diathesis due to their great neovascularization. The gold standard treatment for these tumors is surgery, and due to the tendency for local recurrence, extensive excisions are recommended. In addition, the benefits of immediate reconstruction are well known in terms of physical factors for rehabilitation and at the socio-psychological level. Some cases of giant tumors similar to the presented case have been documented, but no publications have been found for patients with such giant tumors and with immediate

reconstruction performed using an autologous flap combined with alloplastic, for greater complexity, in a patient who rejected blood products. It is considered as a viable, safe and successful surgical option performed on experienced hands.

**Keywords:** Giant phyllodes tumor, Oncoplastic surgery, Immediate reconstruction, Latissimus dorsi myocutaneous flap, Autologous-alloplastic reconstruction, Jehovah's Witnesses

### **Introduction**

Phyllodes tumors (PT) of the breast are rare biphasic fibroepithelial neoplasms characterized by a glandular epithelial component comprising lobules and ducts, surrounded by a hypercellular stromal mesenchyme. Histologically, they often exhibit a distinctive leaf-like architecture, due to papillary projections, hence the name

"phyllodes" tumors<sup>1</sup>. These tumors account for less than 1% of all breast neoplasms. The World Health Organization (WHO) classifies PTs based on nuclear atypia, mitotic activity, margin characteristics, and stromal differentiation into benign (>60-70%), malignant (16-25%), or borderline tumors<sup>2</sup>. Despite being classified as benign, these tumors have a significant risk of local recurrence, making wide surgical excision with clear margins or mastectomy the recommended treatment approach<sup>3</sup>. Tumors exceeding 10 cm in diameter are classified as "giant" PTs, representing less than 10% of all cases. The literature on immediate reconstruction following PT excision is scarce, with even fewer reports on combined autologous-implant reconstruction techniques. Herein, we present an unusual case of a patient with a 45 cm borderline PT, who refused blood products, and was treated with resection and immediate reconstruction using a latissimus dorsi myocutaneous flap (MCFLD) combined with a prosthetic implant. A review of the relevant literature is also provided.

### Case Report

A 42-year-old female patient with no significant medical history presented with a progressively enlarging mass in the right breast (RB) over the course of one year. A magnetic resonance imaging (MRI) performed at an external center identified an 18x14x16 cm lesion, categorized as Breast Imaging Reporting And System (BIRADS) 5, highly suggestive of malignancy. The patient, however, was lost to follow-up for more than six months and did not undergo a biopsy for definitive diagnosis. Upon physical examination, the RB was severely deformed by a massive lesion (figure 1). Further evaluation with a computerized tomography (CT) scan revealed a large, heterogeneous mass in the

RB, characterized by significant vascularity and necrotic areas, suggestive of a degenerating PT (figure 2), accompanied by subcentimeter locoregional lymphadenopathy.

A core needle biopsy confirmed the radiological findings, revealing stromal overgrowth encircling ductal and acinar structures, consistent with at least a borderline PT. The patient underwent a mastectomy with immediate reconstruction using a MCFLD with a 14x8 cm skin paddle, along with the placement of a tissue expander. Additionally, several pathological axillary lymph nodes were excised, and an infiltrated portion of the pectoralis major muscle was resected. The final pathology report described a 45x32x25 cm borderline PT, with extensive neovascularization, 3 mitotic figures per high-power field, and a proliferation index of less than 5%. Margins were clear, and the excised lymph nodes were reactive.

Following the completion of tissue expansion, which was limited due to mild capsular contracture, a circular/radial capsulotomy was performed, and the tissue expander was replaced with a permanent prosthesis. During the same operation, a fibroadenoma excision and a symmetrizing mastopexy were performed on the left breast. Although adjuvant radiotherapy (RT) was recommended due to the tumor's characteristics, the patient declined. During follow-up, oncological, functional, aesthetic, and subjective outcomes have been satisfactory after two surgical interventions (figure 3). The final aesthetic result will be completed with nipple micropigmentation.

### Discussion

PTs must be excised with surgical margins exceeding 1 cm, particularly for borderline and malignant variants, to minimize the risk of local recurrence<sup>4</sup>. In cases of

unusually large tumors, mastectomy is often necessary to achieve adequate margins<sup>5</sup>. The increasing prevalence of breast reconstruction reflects the significant impact that body image loss has on the quality of life and rehabilitation of cancer survivors<sup>6</sup>. Immediate reconstruction is particularly advantageous, as it reduces the number of required interventions<sup>7</sup>, making it the preferred option when feasible.

The MCFLD is one of the most effective techniques for both immediate and delayed breast reconstruction. Achieving optimal breast volume and contour in a single-stage reconstruction can be challenging, which is why the use of implants to augment volume has become more common in the last decade<sup>8</sup>. The role of adjuvant radiotherapy remains somewhat controversial; however, recent studies suggest that it should be considered for both malignant and borderline PTs to reduce the risk of local recurrence<sup>9</sup>. Chemotherapy, in contrast, is typically reserved for malignant cases and used with caution<sup>10</sup>.

Despite the rarity of these tumors, other cases of giant PTs have been documented in the literature (e.g., Tarun et al., 50×25 cm; R. Sarvanandan et al., 40×35 cm; Dong Xia et al., 47×37 cm; S. Islam et al., 50×50 cm)<sup>11</sup>. However, to our knowledge, no other reports describe treatment with mastectomy and immediate autologous reconstruction using the latissimus dorsi flap combined with alloplastic materials. It is notable that neither pectoralis major muscle infiltration nor the extensive vascularity typically associated with giant PTs precludes successful surgery. In this case, meticulous hemostasis was critical, as the patient refused blood transfusions, and the tumor exhibited significant hemorrhagic tendencies.

In summary, oncoplastic procedures for PTs are associated with high survival rates, low rates of local

recurrence, and minimal need for reintervention<sup>12</sup>. Immediate reconstruction offers substantial psychosocial, emotional, and functional benefits, contributing to improved psychological well-being, self-esteem, sexuality, and body image<sup>13</sup>. The symmetrizing aspect of oncoplastic surgery further enhances these outcomes. Based on our experience, we conclude that combined autologous-alloplastic IR can be safely and effectively performed, even in the context of giant, highly vascularized, and infiltrative PTs. In skilled hands, this approach yields favorable outcomes with minimal need for additional interventions.

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**Legend Figures:**

Figure 1: Phyllodes Tumor of the right breast on physical examination



Figure 2: Preoperative CT scan showing tumor dimensions and radiological characteristics



Figure 3: Short-Term outcome of mastectomy with immediate reconstruction using Latissimus Dorsi Flap and implant, along with contralateral breast symmetrization via mastopexy. Nipple micropigmentation of the right breast is pending for final outcome.

