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## How to Treat Breast Fibroadenoma: Comparing Quality, Cosmesis and Costs



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Breast fibroadenoma is the most common benign breast tumour, typically occurring in young women aged 20 to 30. It accounts for a significant portion of all breast biopsies. Though generally non-malignant, with a very low probability of turning cancerous, fibroadenomas can cause anxiety and discomfort, particularly in cases where the masses are large or rapidly growing. Consequently, many women opt for treatment to alleviate physical symptoms or psychological stress. The main treatment options include open surgery (OS), vacuum-assisted breast biopsy (VABB) and the more recent high-intensity focused ultrasound (HIFU). These procedures differ considerably in their impact on the patient's quality of life (QOL), cosmetic satisfaction, and cost-effectiveness. A recent review published in *Academic Radiology* explores the comparative advantages of these three treatment methods based on their effectiveness, patient experience and financial implications.

### Quality of Life: Patient Wellbeing Post-Treatment

Patient quality of life (QOL) is a critical factor when evaluating treatment outcomes for benign conditions like fibroadenomas. OS has long been considered the standard treatment, providing full mass removal, but it can involve longer recovery times and visible scarring. For some patients, this may lead to diminished self-esteem or body image concerns, affecting their mental health. On the other hand, VABB offers a minimally invasive approach that uses a vacuum-assisted device to remove the mass through a small incision. This results in a quicker physical recovery, but patients still face some risks of minor complications such as skin dimpling or residual tumours. HIFU, being a non-invasive technique, appears to offer significant advantages regarding mental well-being. This technique uses focused ultrasound energy to heat and destroy the targeted tissue without any surgical incision. Studies indicate that patients who undergo HIFU report a higher sense of psychological well-being due to the absence of visible scars and a shorter recovery period. This improvement in mental health can be linked to the perception of minimal disruption to their appearance and daily activities.

### Cosmetic Outcomes: Aligning with Patient Preferences

Cosmetic satisfaction plays an increasingly important role in the decision-making process for breast fibroadenoma treatments. Young patients, in particular, prioritise procedures that offer effective results with minimal scarring. OS, while effective at removing larger fibroadenomas, often results in visible scars and changes to the breast's shape, leading to lower cosmetic satisfaction ratings. Surgical incisions, even those designed for improved cosmetic outcomes, can damage breast ducts and result in complications such as loss of nipple sensation. VABB attempts to address some of these concerns by using a smaller incision to extract the tumour. However, issues like tissue loss, which can result in skin dimpling, and the potential for leftover tumour fragments reduce its cosmetic appeal. HIFU, by contrast, excels in this regard, offering superior cosmetic outcomes as it leaves no incision scars and preserves surrounding breast tissue. This approach not only improves the aesthetic appearance but also boosts patient confidence. High satisfaction rates were reported among patients who underwent HIFU, making it the preferred choice for those concerned about preserving breast aesthetics.

### Cost-Effectiveness: Evaluating Financial Implications

Financial considerations are often paramount in healthcare decisions. Although OS is the least expensive in terms of direct costs, its indirect costs—stemming from longer recovery times, hospital stays, and potential complications—make it less appealing in some scenarios. VABB is a more costly upfront procedure due to the required specialised equipment and expertise. However, it offers quicker recovery and less downtime. Despite these advantages, the cost-effectiveness of VABB is challenged by its cosmetic limitations and risks of tumour residue. HIFU, while initially expensive, emerges as a cost-effective option when evaluated through quality-adjusted life years (QALYs). This metric accounts for both the patient's health and well-being post-treatment and the financial costs of achieving that state. With HIFU, the additional expense is offset by the shorter recovery time and the superior mental and physical health outcomes reported by patients. Cost-effectiveness studies indicate that HIFU's benefits extend beyond its clinical impact, aligning more closely with patients' desire for holistic health improvements and aesthetic preservation. As healthcare increasingly shifts towards value-based approaches, HIFU's high QALY scores make it a viable long-term alternative to traditional surgical interventions.

their impact on quality of life, cosmetic outcomes and cost-effectiveness vary significantly. Open surgery remains a reliable option for complete mass removal, particularly for larger or rapidly growing fibroadenomas. However, the visible scarring and extended recovery time limit its appeal, especially for young women concerned with their appearance. VABB, although minimally invasive, faces challenges related to incomplete mass removal and cosmetic inconsistencies. HIFU, by contrast, stands out as a non-invasive and cosmetically favourable option, offering significant improvements in mental well-being and QOL, along with reasonable financial viability. This aligns well with current trends towards patient-centred care and minimally invasive procedures. As patients increasingly seek treatments that enhance their health and self-image, the demand for non-invasive techniques like HIFU will likely grow. Consequently, healthcare providers should consider adopting HIFU as a mainstream treatment option for breast fibroadenoma, offering patients a balanced approach to physical health, mental well-being, and aesthetic satisfaction.

In summary, when choosing a treatment for breast fibroadenoma, it is essential to consider not just the clinical effectiveness but also the patient's quality of life, cosmetic preferences, and overall financial impact. HIFU presents a compelling case for itself as a modern, patient-focused treatment, demonstrating the potential to redefine standards of care in managing benign breast conditions.

**Source:** [Academic Radiology](#)

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