

advancement flap. In both meshes very good aesthetic results were achieved.

Conclusions: The clinical results obtained in this study suggest that both synthetic meshes used in BR are not inferior to biologic meshes regarding outcomes. Complication rate and BR failure were low and both meshes can be our choice instead of biological meshes reducing BR reconstruction cost significantly without compromising results.

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Helium plasma scalpel in breast cancer surgery: effectiveness and surgeon's impressions

S. Alessandrini¹, R. Bellocchi¹, G. Lolli¹. ¹Breast Surgery Unit, San Giovanni Battista Hospital, Foligno, Italy

Goals: This is the first report of helium plasma scalpel use (J-plasma[®], Apyx[™] Medical) in breast cancer surgery. Preliminary studies available are promising and we tested these aspects in our clinical practice [1, 2].

Methods: We realized a single-center retrospective study collecting data from November 2023 to November 2024.

The aspects that seemed most interesting are:

1. Reduction of energy dispersion (reduction of thermal damage). This limits local traumatism with probable reduction in developing post-operative adhesions [3–5]
2. Reduction of tissue dehydration [6, 7]
3. Antibacterial effect of plasma and helium gas. Cold atmospheric plasma (CAP) preferentially destroys different types of tumor cells and bacteria thanks to its ability to develop ionizing particles, free radicals and electric fields [4]
4. Superficial action of plasma: de-epithelialization with preservation of deep dermal vessels [8]
5. It can be employed also in mini-invasive breast surgery setting thanks to laparoscopic and robotic scalpels reducing thermal and vascular damage and pro-inflammatory process consequently.

Results: 50 patients underwent surgery with helium plasma scalpels employment aged between 20 and 90 years on average 60 years, of both sexes, 3 men and 47 women. 47 surgeries in cancer patients and 3 surgeries for gigantomastia and gynecomastia (Table 1).

Patients (n)	50
Cancer patients (n)	47 (94%)
Patients with Benign pathology (n)	3 (6%)
Age	60 (20–90)
Sex	F 47 (94%) M 3 (6%)
Lumpectomy (n)	3
Mastectomy (n)	49
	12 (24%) Simple
	21 (43%) Nipple Sparing (NSM) with subpectoral expander
	16 (33%) NSM with implant+ADM (dual plane or prepectoral)
Reductive Mammoplasty (n)	17
	8 bilateral
	1 unilateral (symmetrization purposes)

Helium plasma scalpel develops less heat with reduction in traumatism of mastectomy flaps.

Coagulation on large surfaces appears rapid and effective with creation of superficial eschars that do not traumatize the tissue in

depth. We appreciated seal action in anticoagulated old patients especially.

We report one case of surgical site infection (2%) which required expander removal, one case of delay in healing process (2%) in reductive mammoplasty and one case of late seroma (2%) in patient with irradiated tissue.

We found a reduction in seromas and the volume of surgical drains of 30%

We report a reduction in blood loss with significant vessel sparing in de-epithelialization process with helium plasma jet.

As for the disadvantages, we have loss of tactile feedback with plasma jet, longer section and cauterization time and higher costs.

Conclusions: Our preliminary data are promising but referred to a modest sample. A large-scale application is needed and a quantitative and non-qualitative measurement of each aspect to be able to compare the various technologies.

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Case Report: Rare Metastasis of Renal Cell Carcinoma to the Breast – A Diagnostic and Management Challenge

A.S. Sahoo^{1,2}, M. Salman^{1,2}, B. Singh^{1,2}, L. Ragad², R. Elayyan². ¹School of Medicine, University of Central Lancashire, Preston, United Kingdom; ²Breast Surgery, King's College Hospital, London, United Kingdom

Goals: To report a rare case of renal cell carcinoma (RCC) metastasis to the breast, an occurrence that accounts for only 0.5% to 2% of all breast neoplasms. Documenting such cases is essential for enhancing diagnostic accuracy, guiding appropriate management, and deepening the understanding of RCC's metastatic behaviour.

Methods: A 54-year-old woman, with a history of RCC treated by nephrectomy six years prior, underwent routine imaging that revealed a 4 mm nodule in the lower outer quadrant of her right breast. Mammography further identified a 6 mm circumscribed nodule in the posterolateral aspect, absent on imaging from four years earlier. Ultrasound evaluation corroborated the findings, describing a benign-appearing 5 mm lesion.

A core biopsy revealed an inflammatory lesion composed of clear cytoplasm and macrophages. Considering her prior RCC diagnosis, immunohistochemistry confirmed metastatic RCC through markers PAX8, CD10, and MNF116. The lesion was tagged with a radio-frequency localisation device before a wide local excision was performed, avoiding axillary surgery.

Results: Postoperative histopathology confirmed the lesion as a 5 mm well-circumscribed metastatic RCC with no evidence of vascular invasion, ductal carcinoma in situ (DCIS), or lobular carcinoma in situ (LCIS). Imaging and immunohistochemistry were instrumental in distinguishing the metastatic RCC from a primary breast carcinoma.

The patient underwent wide local excision, which spared unnecessary axillary intervention and mastectomy. The lesion's identification, while minor, was a pivotal marker of systemic disease recurrence, prompting further assessment for distant metastases and systemic therapy planning.

Conclusions: Metastatic RCC to the breast is an exceptionally rare presentation, often diagnosed late due to overlapping clinical and imaging features with primary breast carcinoma. Accurate diagnosis through triple assessment, including core biopsy and immunohistochemistry, is crucial for appropriate surgical and systemic management. This case underscores the importance of long-term vigilant follow-up in RCC patients and highlights the need for further research to establish standardised management guidelines for RCC breast metastases.

This report also emphasises the importance of differentiating metastatic lesions to avoid overtreatment and highlights RCC's capability for unusual metastatic spread, even many years after initial treatment.

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Pushing the Boundaries of Oncoplastic Breast Surgery - Use of Chest Wall Perforator Flaps to Tackle Difficult Areas in Breast Surgery

I. Laroija¹, G. Khurana¹, N. Sah¹, A. Bhatt¹, S. Khare¹, D. Dahiya¹.
¹General Surgery, PGIMER, Chandigarh, India

Goals: To evaluate surgical, oncological and Patient reported outcome measures (PROMs) in patients undergoing CWPFs for novel indications.

Methods: 7 patients underwent CWPFs for novel indications (central, upper inner quadrant tumours and large tumours requiring skin

cover) in the Breast and Endocrine Surgery unit, PGIMER, Chandigarh, India, from November 2023 to November 2024. Surgical complications were graded as per Clavien –dindo scale. Margin positivity rates and short term oncological follow up were noted. PROMs were collected at baseline, then at follow up, using a questionnaire modified from the National Mastectomy and Breast Reconstruction Audit (NMBRA) study, UK.

Results: Average follow up was 7.7 months.

All patients underwent margin negative excision. 1 patient (malignant phyllodes) developed local recurrence.

One patient had partial flap necrosis (Clavien dindo Grade 3b) while another had superficial necrosis of the skin paddle (Clavien-dindo Grade 3a). Both had undergone MICAP Flap with skin.

All the patients were either satisfied or very satisfied with the post-operative appearance of their breasts. Only 1 patient reported difficulty in carrying out normal activities due to shoulder tightness.

Conclusions: WPFs represent a novel solution for central, UIQ tumours and tumours requiring skin cover; although MICAP with skin paddle may have higher complication rate.

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A prospective study evaluating surgical and Patient reported outcome measures in patients undergoing Chest Wall Perforator Flaps (CWPFs) for breast reconstruction

N. Sah¹, I. Laroija¹, S. Khare¹, A. Bhatt¹, T. Gupta². ¹Division of Endocrine & Breast Surgery, General Surgery Department, Post Graduate Institute of Medical Education & Research, Chandigarh, Chandigarh, India; ²Department of Plastic & Reconstructive Surgery, Post Graduate Institute of Medical Education & Research, Chandigarh, Chandigarh, India

Goals: This study aims to evaluate Patient Reported Outcome Measures and surgical outcomes in patients undergoing CWPFs for any indication as part of their breast surgery

Methods: A prospective observational study was performed involving 10 patients who underwent CWPFs in between September 2023 to November 2024 at the Department of General Surgery, PGIMER, Chandigarh, India. Surgical and Patient reported outcomes were recorded at preop, 1, 3 and 6 months follow up. Patients were called in person at the time of follow-up and were asked to fill up a PROMs questionnaire. The questionnaire was modified from National Mastectomy and Breast Reconstruction Audit (NMBRA Study, UK).

Results: The average age of the patients was 42.7 years (± 12.1 years). The most common diagnosis was Invasive ductal carcinoma (60%)

Table 1. (abstract: P325).

Clinico-pathological characteristics, indications, procedure formed and surgical.

Procedure	n	Stage	Pathology; Grade	Indications	Complications	Clavien Dindo Grade
Wide Local Excision (WLE) with skin + Medial Intercostal Artery Perforator (MICAP) Flap with Axillary Clearance (AC)	1	Ca left breast cT3N0M0	IDC; III	Volume replacement with skin cover	nil	
WLE with NAC+ MICAP with skin + SLNB/AC	2	Ca breast c(m)T1N0M0; ycT2N0M0	IDC;I IDC III	Volume replacement (UIQ and central quadrant) with areolar Reconstruction	Superficial skin necrosis	IIIa
WLE with NAC+ LICAP with skin+ SLNB/ AC	3	Ca breast c(m) T1N0M0-1; cT2N0M0 (central quadrant)-1; yc(m) T1N0M0-1	IDC-I (1); IDC-II (2)	Volume replacement and areolar Reconstruction (central quadrant)	nil	
WLE + MICAP with skin replacement (UIQ) and skin cover	1	Left phyllodes tumour Partial flap necrosis	Malignant IIIB	phyllodes	Volume	