ANZ Journal of Surgery

WILEY | Royal Australasian College of Surgeons

PLASTIC AND RECONSTRUCTIVE SURGERY OPEN ACCESS

The Impact of Overseas Cosmetic Tourism on the Australian Public Hospital System

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Received: 22 February 2025 | **Revised:** 20 August 2025 | **Accepted:** 7 January 2026

Keywords: Australia | cosmetic tourism | plastic surgery | postoperative complications | public hospitals

ABSTRACT

Background: Cosmetic tourism has become increasingly popular, with patients seeking lower cost cosmetic surgery overseas. However, complications often necessitate management in local public hospitals upon their return, placing a burden on healthcare systems. This study examines the demographics, complications, interventions and resource utilisation of patients presenting to an Australian hospital with complications from overseas cosmetic surgery.

Methods: This study retrospectively reviewed patients who presented to Westmead Hospital, NSW, during two time periods—01/07/2022 to 01/01/2023 and 01/05/2024 to 30/12/2024—with complications following cosmetic surgery performed overseas. Hospital records were analysed to extract data on patient demographics, comorbidities, presenting complications, interventions, diagnostic tests and resource utilisation. Descriptive statistics were used to summarise the findings, and patterns in clinical management were evaluated.

Results: Twenty-four patients met the inclusion criteria, with a mean age of 38.4 ± 12.5 years; 87.5% were female. Comorbidities included smoking (50%), mental health conditions such as anxiety, depression, or self-harm (20.8%) and hypothyroidism (12.5%). Abdominoplasty (54.2%), breast augmentation (20.8%) and liposuction (25%) were the most frequently performed procedures. The mean Charlson Comorbidity Index was 0.2 ± 0.4, and the mean LACE Index was 5.9 ± 1.5. Complications included wound dehiscence (45.8%), infection (41.7%) and seroma (20.8%). The median time from surgery to presentation was 3.8 weeks, with a mean hospital stay of 3.3 ± 2.9 days. Interventions included oral antibiotics (83.3%), IV antibiotics (58.3%), drainage or aspiration (33.3%) and surgery (54.2%).

Conclusion: Overseas cosmetic surgery is associated with high complication rates and significant utilisation of public hospital resources. These findings highlight the impact of cosmetic tourism on the Australian healthcare system.

1 | Introduction

The increasing demand for cosmetic surgery and the growing normalisation of aesthetic procedures has led to a significant rise in cosmetic tourism [1, 2]. Patients seek overseas surgeries due to perceived advantages such as lower costs, reduced wait times and the opportunity to combine surgery with travel [2, 3]. However, these benefits of cosmetic tourism may be outweighed by the associated risks, particularly the lack of stringent safety standards in some international clinics, which lead to postoperative complications such as infections, wound dehiscence, uncontrolled pain and poor aesthetic outcomes [4].

Patients return home with limited access to their original surgeons and lack of adequate follow up, necessitating treatment from local healthcare providers [5]. This places considerable

burden on public healthcare systems, with patients presenting with complications requiring emergency department visits, specialist consultations and, in some cases, additional surgeries. These demands strain resources, divert attention from other patients and increase healthcare costs to the already strained Australian public health system [5]. Furthermore, it effectively transfers the costs of managing complications from the overseas private sector to the Australian public system, subsidising the practices of international private surgeons and clinics.

Despite the increasing prevalence of cosmetic tourism, little is known about its specific impact on the Australian healthcare system. Most existing studies have focused on the United States and the United Kingdom [4, 6, 7]. This study seeks to fill that gap by providing a comprehensive analysis of patients presenting to an Australian tertiary public hospital with complications related to cosmetic surgeries performed overseas. These results will guide healthcare professionals in improving patient safety, optimising resource allocation and raising public awareness about the risks associated with cosmetic tourism.

2 | Methods

Two separate retrospective reviews were conducted using the electronic medical records (EMR) of patients who presented to Westmead Hospital for the management of post-operative complications arising from cosmetic surgery performed overseas. The first review covered presentations between 01/07/2022 and 01/01/2023, while the second reviewed presentations between 01/05/2024 and 30/12/2024 (Figure 1). These two review periods reflect the project's initiation by an original investigator who later transferred hospitals, followed by its revival and completion by the remaining authors. While a continuous study period would have been ideal, this staggered approach allowed for the inclusion of additional relevant cases while maintaining consistent methodology across both cohorts. There were no exclusion criteria. Hospital records were reviewed to collect data on patient demographics, presenting complications, interventions performed, diagnostic tests utilised and community nursing involvement.

To assess the burden of comorbid conditions and the risk of adverse outcomes, the Charlson Comorbidity Index (CCI) and the LACE Index were calculated for each patient. CCI is a widely used measure to predict the 1-year mortality risk based on the presence of chronic comorbid conditions. It scores conditions such as myocardial infarction, liver disease and diabetes, with higher scores indicating a greater burden of disease. CCI scores range from 0 (no comorbidities) to greater than 5 (indicating severe comorbidities and higher mortality risk) [8]. The LACE Index is a predictive tool used to assess the risk of hospital readmission or death within 30 days post-discharge, based on Length of stay (L), Acuity of the admission (A), Comorbidity (C) and Emergency department visits (E) in the preceding 6 months. The LACE Index ranges from 1 to 19, with higher scores indicating a higher likelihood of readmission within 30 days [9]. Post-operative complications were categorised using the Clavien–Dindo classification, where Grade

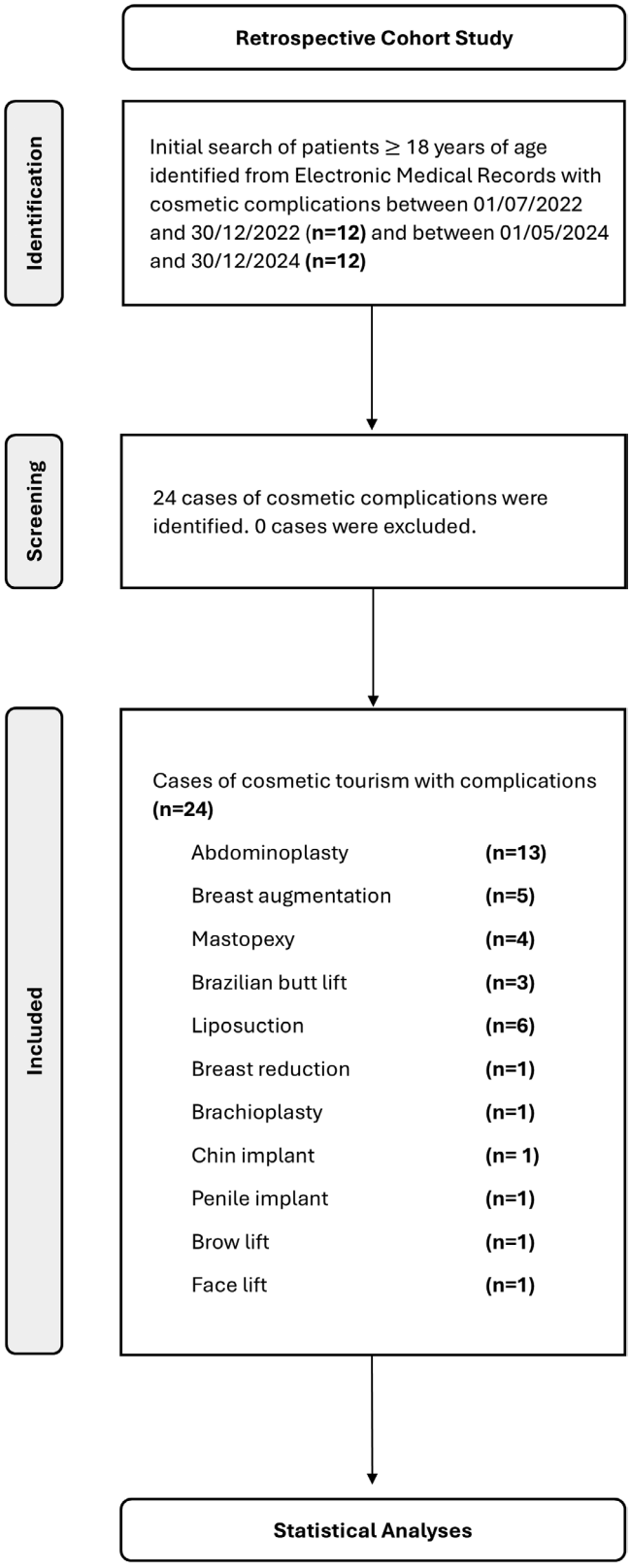

FIGURE 1 | Flowchart of retrospective data formation.

I and II refer to minor complications requiring minimal or pharmacological intervention, and Grades III to V represent increasingly severe complications requiring surgical, radiological, or intensive care interventions, or resulting in death as detailed in Table 1 [10].

FIGURE 2 | 46-year-old female with abdominal wall necrosis after abdominoplasty.

FIGURE 3 | 28-year-old female with infected, necrotic NAC with exposed underlying breast implant after augmentation mastopexy.

This study was conducted in accordance with the STROBE guidelines for observational studies [11]. The patient population was summarised using descriptive statistics. Categorical variables were summarised with frequencies and percentages. Continuous data was summarised using mean, standard deviation and ranges. Outcomes were analysed to identify patterns in interventions, diagnostic approaches and resource utilisation.

TABLE 1 | Clavien–Dindo classification of surgical complications (adapted from Dindo et al. [10]).

Grade	Definition
Grade I	Deviation from the normal post-operative course not requiring pharmacological treatment or operative, endoscopic, or radiological intervention.
Grade II	Complications requiring pharmacological treatment beyond what is permitted in Grade I (e.g., antibiotics, transfusion).
Grade III	Requiring surgical, endoscopic, or radiological intervention. IIIa: Intervention not under general anaesthesia. IIIb: Intervention under general anaesthesia.
Grade IV	Life-threatening complication requiring intensive care management. IVa: Single organ dysfunction IVb: Multi-organ dysfunction.
Grade V	Death of the patient.

2.1 | Ethics Statement

This study was conducted in accordance with the ethical standards of the Western Sydney Local Health District (WSLHD) Research Governance Office. It was approved through the WSLHD Research Approval Processes and deemed to be of low risk (Approval Number: 2024/ETH02523). No direct patient contact occurred, and all data were de-identified to ensure confidentiality and compliance with ethical guidelines. Any clinical photographs included in this study were used with the explicit consent of the patients.

3 | Results

A total of 24 patients admitted under the Plastic Surgery team at Westmead within the study periods met the inclusion criteria for complications related to cosmetic procedures performed overseas. Table 2 outlines patient demographics, comorbidities, smoking status and relevant risk indices. Most patients were female, with a wide range of pre-existing medical and mental health conditions. While the Charlson Comorbidity Index indicated a low burden of chronic disease overall, the LACE index suggested a moderate risk of hospital readmission (Table 2).

Surgical procedures performed overseas are summarised in Table 3, with abdominoplasty being the most common, followed by liposuction and breast procedures. Over half of the cohort underwent multiple concurrent procedures. Turkey was the most frequent country of surgery, followed by Thailand and Lebanon (Table 3).

Table 4 details the diagnostic investigations and interventions required upon admission. Most patients required some form of medical or surgical treatment, including antibiotics, imaging,

FIGURE 4 | 35-year-old female with infected, overgrown umbilicus after abdominoplasty.

TABLE 2 | Patient characteristics.

Age mean ± SD	38.4 ± 12.5
Sex % (*n*)	
Female	87.5 (21)
Male	12.5 (3)
Comorbid conditions % *n*	
Hypertension	8.3 (2)
Hypothyroidism	12.5 (3)
Obesity	8.3 (2)
Mental health conditions (anxiety/depression/self-harm)	20.8 (5)
Smoking	50 (12)
Fibromyalgia	4.2 (1)
PCOS	4.2 (1)
GORD	20.8 (5)
Asthma	8.3 (2)
Previous gastric sleeve	12.5 (3)
Previous plastic surgery	12.5 (3)
Pulmonary embolism (provoked)	4.2 (1)
Irritable Bowel syndrome	4.2 (1)
Transient ischemic attack	4.2 (1)
Chronic pain	4.2 (1)
Migraine	4.1 (1)
Osteoarthritis	4.1 (1)
Charlson comorbidity index mean ± SD	0.2 ± 0.4
LACE index mean ± SD	5.9 ± 1.5

wound cultures, or theatre trips. The median time to presentation from surgery was just under 4 weeks, and hospital stay averaged approximately 3 days (Table 4).

TABLE 3 | Original surgery characteristics.

Procedure % (*n*)	
Abdominoplasty	54.2 (13)
Breast augmentation	20.8 (5)
Mastopexy	16.7 (4)
Brazilian butt lift	12.5 (3)
Liposuction	25 (6)
Breast reduction	4.2 (1)
Brachioplasty	4.2 (1)
Chin implant	4.2 (1)
Penile implant	4.2 (1)
Brow lift	4.2 (1)
Face lift	4.2 (1)
Amount of procedures % (*n*)	
One	41.7 (10)
Two or more	58.3 (14)
Location % (*n*)	
Turkey	54.2 (13)
Thailand	12.5 (3)
Lebanon	8.3 (2)
Jordan	4.2 (1)
Syria	4.2 (1)
Korea	4.2 (1)
India	4.2 (1)
Iraq	4.2 (1)
Mongolia	4.2 (1)

Table 5 outlines the range of complications encountered. Most involved wound-related issues, with presentations spanning a broad spectrum of severity (Figures 1–5). While many complications were classified as moderate (Clavien–Dindo Grade II–IIIb), a notable subset required return to theatre or management of serious sequelae such as necrosis and thromboembolism. Follow-up data suggest that the majority of patients engaged with ongoing care; however, a small number either did not attend review or remain under follow-up. Community nursing was frequently involved in aftercare (Table 5).

4 | Discussion

Our study highlights the significant clinical burden posed by complications following overseas cosmetic surgery. Combined procedures were common (58.3%), which may have contributed to the high rates of wound dehiscence (45.8%), infection (41.7%) and seroma formation (20.8%) observed. Nearly half of the patients (45.8%) required operative management, and the average length of hospital stay was 3.16 days. These findings suggest that

TABLE 4 | Admission characteristics.

Weeks since original surgery, median ± SD	3.8
Length of stay (days), mean ± SD	3.3 ± 2.9
Plastic surgery interventions % (*n*)	
None	0 (0)
Oral antibiotics	83.3 (20)
IV antibiotics	58.3 (14)
Drainage/aspiration	33.3 (8)
Dressings	87.5 (21)
Surgery	54.2 (13)
Investigations, % (*n*)	
Ultrasound	45.8 (11)
CT scan	37.5 (9)
X-ray	29.2 (8)
Wound MCS	75 (18)
Blood culture	25 (6)

TABLE 5 | Patient outcomes.

Complications from original surgery	% (*n*)	Clavien–dindo grade
Wound dehiscence	45.8 (11)	II–IIIb
Seroma	20.8 (5)	I–IIIa
Pain	4.2 (1)	I–II
Infection	41.7 (10)	II–IIIa
Contour abnormality	12.5 (3)	I
Hematoma	4.2 (1)	II–IIIb
Necrosis	8.3 (2)	IIIa–IIIb
Abscess	8.3 (2)	IIIa
Nerve palsy	4.2 (1)	I–II
Pulmonary embolism	4.2 (1)	IVa
Number of times to OT, mean ± SD	0.9 ± 1.1	
Seen for follow up % (*n*)[a]	91.7 (22)	
Mean length of follow up (weeks), mean ± SD	7.3 ± 12.7	
Community nursing % (*n*)	45.8 (11)	

[a]Two patients did not attend follow up clinic appointments, and three patients are ongoing outpatient reviews.

undergoing multiple procedures in a single surgical episode—commonly marketed as 'surgical packages' by overseas cosmetic providers—may increase the likelihood of adverse outcomes, particularly in settings where perioperative optimisation and postoperative care are limited.

FIGURE 5 | 34-year-old male with infected penis implant.

Notably, 50% of patients were active smokers, a population typically considered high-risk for elective surgery due to impaired wound healing [12]. Australian plastic surgeons are generally cautious in offering elective procedures to such patients, suggesting a possible difference in clinical thresholds or risk acceptance overseas. Additionally, one patient developed a DVT/PE, raising concerns about the additive thromboembolic risks posed by both surgery and long-haul travel. The countries where these surgeries were performed, such as Turkey, Thailand and Lebanon, have also been associated with antimicrobial resistance patterns that may complicate post-operative infection management [13]. These findings are consistent with international reports from the UK and USA, which describe similar complications and resource utilisation among patients undergoing cosmetic tourism [4, 7, 14–17]. The demand for imaging (CT, ultrasound), surgical intervention and prolonged hospital stays in our cohort underscores the substantial burden cosmetic tourism places on the public healthcare system.

Although the mean Charlson Comorbidity Index (CCI) was low (0.17 ± 0.38), suggesting a relatively healthy cohort, the LACE Index (5.9 ± 1.50) placed patients in a moderate-risk category for readmission. This highlights that even despite low comorbidity burden, medically fit patients face increased risk of ongoing complications following overseas procedures. Furthermore,

inadequate follow up from international clinics was a reoccurring issue, with patients often advised to seek drain or suture removal from local GPs or emergency departments, further straining domestic resources. In contrast, patients who undergo cosmetic surgery in are subject to regulatory oversight, continuity of care and postoperative follow up, which are generally incorporated into the cost of treatment. These safeguards may reduce the risk of complications and hospital presentations, although cost remains a significant barrier for many patients.

Education plays a key role in addressing the risks of cosmetic tourism. Public awareness campaigns could inform potential patients about the importance of verifying surgeon credentials, understanding the risks of combined procedures and ensuring access to postoperative care. Policymakers might consider implementing mandatory insurance for cosmetic tourists to cover complications or establishing agreements with international clinics to ensure proper follow-up care, bridging the gap in postoperative management. Together, these efforts could mitigate risks and promote safer outcomes for patients seeking procedures abroad.

This study has some limitations. Its retrospective nature introduces the potential for underreporting or miscoding of complications, and its single-centre design may limit its generalisability. Cost analysis was beyond the scope of this study, and future research should aim to capture direct and indirect economic impacts on the healthcare system. Prospective studies could also investigate patient motivations and evaluate the efficacy of educational strategies aimed at reducing preventable complications.

5 | Conclusion

Our study highlights the clinical burden of complications following overseas cosmetic surgery, with many patients requiring operative management and prolonged follow-up. These findings add to growing evidence that cosmetic tourism can place a significant strain on public hospital resources.

Author Contributions

Altinka Res: conceptualization, writing – original draft, data curation, formal analysis, methodology, validation, visualization. **Brandon He:** investigation, writing – review and editing. **Y. Gehan Karunaratne:** supervision, methadology, writing – review and editing. **Michael Cheung:** data curation. **Frank Hsieh:** supervision, project, administration, resources.

Acknowledgement

Open access publishing facilitated by Macquarie University, as part of the Wiley - Macquarie University agreement via the Council of Australian University Librarians.

Funding

The authors have nothing to report.

Disclosure

The authors have nothing to report.

Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

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