



HEALTH UTILITY, FUNCTION, AND WORK PRODUCTIVITY AFTER FREE FLAP RECONSTRUCTION FOR HEAD AND NECK CANCER: IMPLICATIONS FOR MEASURING VALUE



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Background

- ❖ Free flap reconstruction is central to restoring form and function after advanced head and neck cancer (HNC) resection¹⁻⁵.
- ❖ Its long-term value is often judged using generic health utility measures which may not reflect disease-specific burden⁶.
- ❖ This study quantified multi-domain patient-reported outcomes and health utilities among Australian HNC survivors to inform value assessment and economic evaluation.

Methods

- ❖ An Australian national cross-sectional survey was conducted among adults who had undergone free flap reconstruction for HNC.
- ❖ Recruitment was via advocacy organisations, treating surgeons, and social media.
- ❖ Participants completed EQ-5D-5L, specific University of Washington Quality of Life Questionnaire (UW-QoL) domains, FACE-Q Head and Neck smile subscales, Insomnia Severity Index (ISI), and Work Productivity and Activity Impairment (WPAI) questionnaires.
- ❖ Trismus was assessed using the self-reported mouth-opening screening questions of the FACE-Q Head and Neck smile subscales.
- ❖ Analyses were descriptive.

Results

- ❖ Of 186 respondents, 141 who had undergone free-flap reconstruction were analysed.
- ❖ Median time since reconstruction was 44.0 months. Mean EQ-5D-5L utility was 0.90 (SD 0.11), indicating relatively preserved generic health utility.
- ❖ This value was similar or higher than Australian population norms, and that of several common chronic diseases (7,8).

Distribution of EQ-5D-5L Index Values

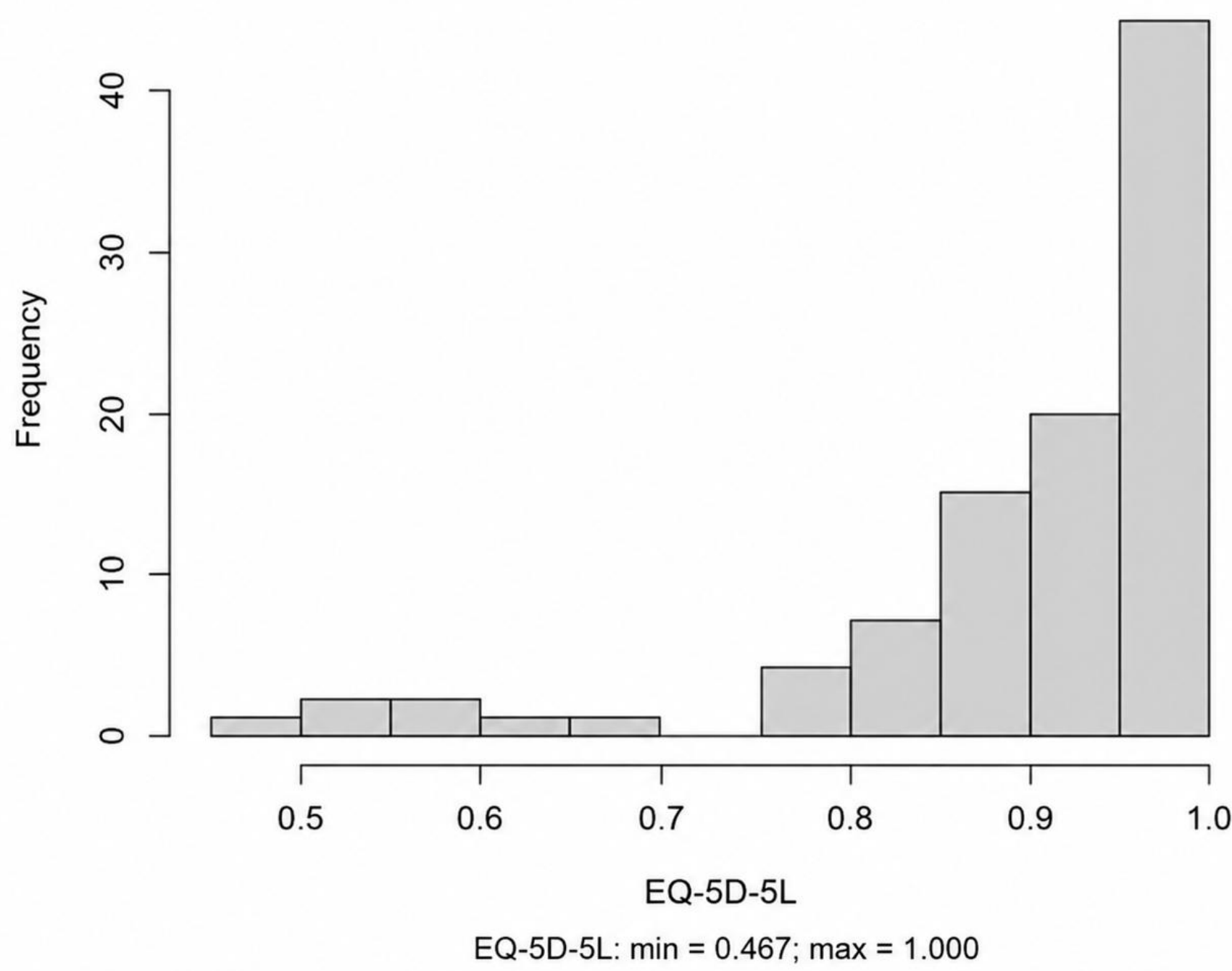


Figure 2. Distribution of EQ-5D-5L index values. Utility values ranged from 0.467 to 1.000, with higher values indicating better health status.

- ❖ Nonetheless, substantial condition-specific burden persisted: 52.5% were unable to swallow certain solid foods, 61.0% could eat soft solids but could not chew some foods, and 54.9% screened positive for trismus.
- ❖ Fear of cancer recurrence was identified as an important issue by 62.7% of participants, and 55.8% felt self-conscious about their smile, with 31.0% reporting an asymmetric smile all the time. Mean Insomnia Severity Index was 11.9 (SD 6.1).
- ❖ Among the employed participants (38.1%), the mean overall WPAI was 21%, indicating modest work impairment.

Long-Term Functional and Psychosocial Burden Following Free-Flap Reconstruction

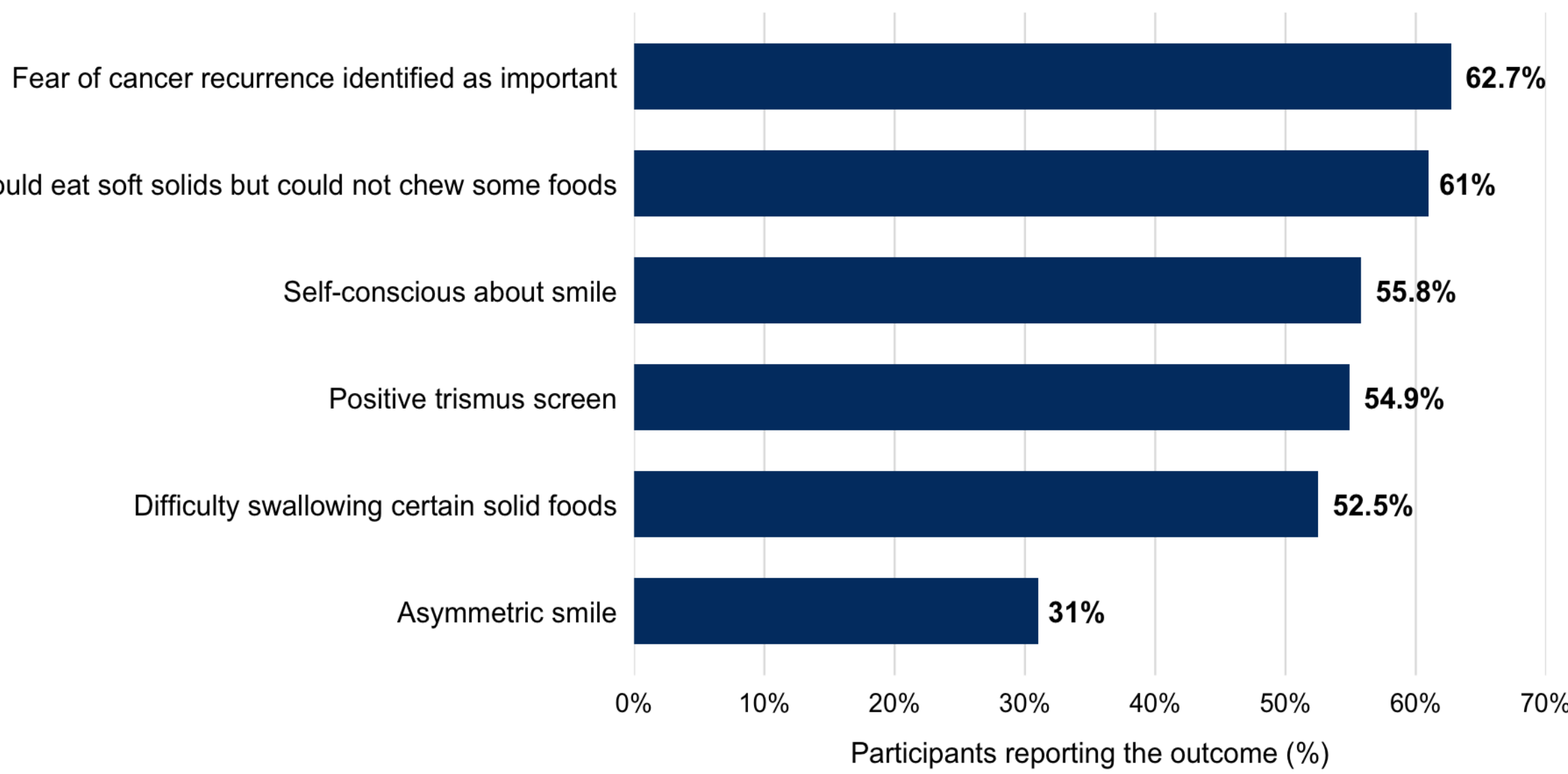


Figure 3. Prevalence of long-term functional and psychosocial burden following free-flap reconstruction. Percentages represent available item-level responses and denominators may vary because of item non-response.

Conclusions

- ❖ Survivors of HNC with free flap reconstruction report high global utility despite long-term patient reported burden in specific functional, psychosocial, sleep, and smile-related domains.
- ❖ Reliance on generic utility alone may underestimate reconstruction-specific survivorship burden.
- ❖ Condition specific patient-reported outcomes should be considered alongside health utility measures in health technology assessment and reimbursement decisions.

Participant Flow

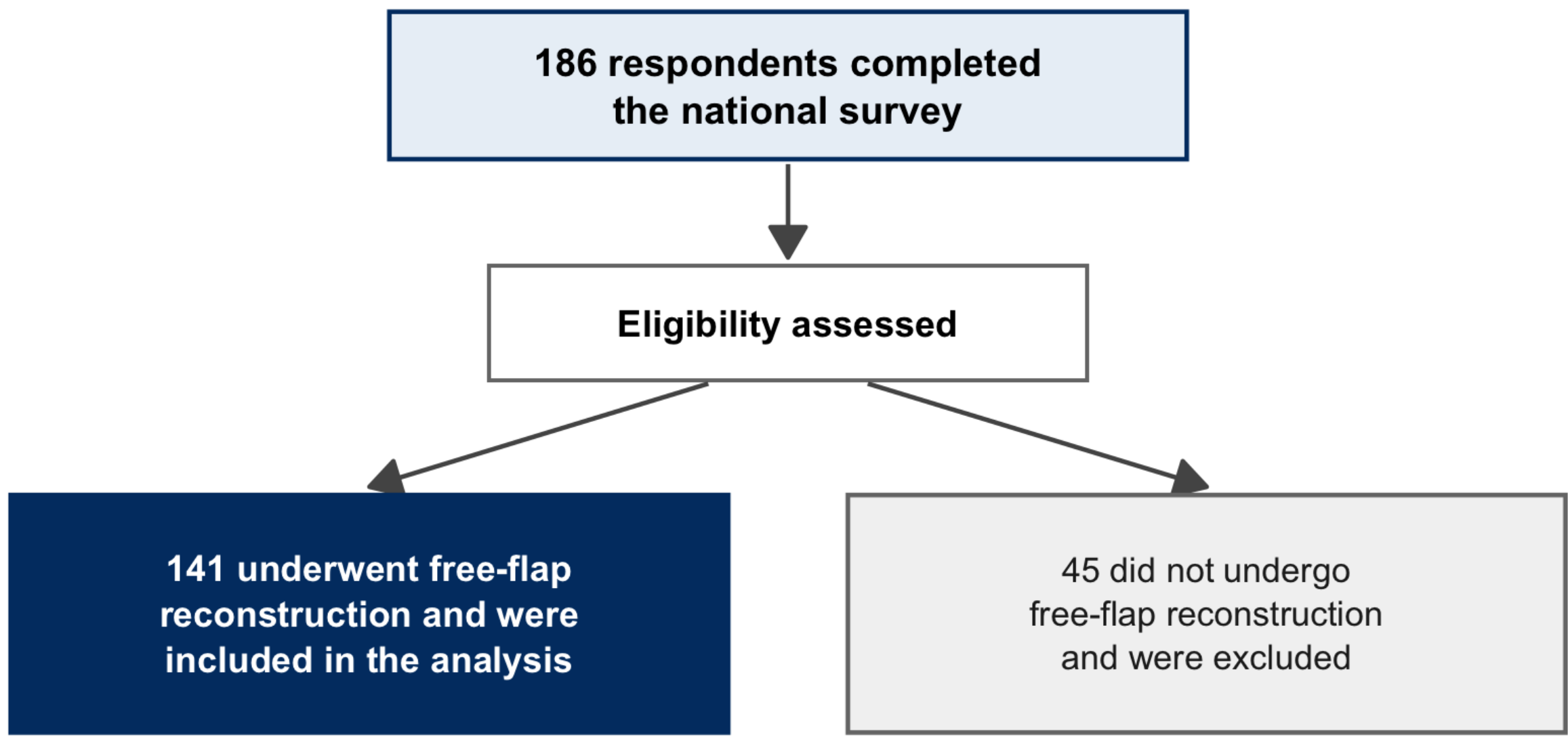


Figure 1. Participant inclusion flow. Of 186 survey respondents, 141 who underwent free-flap reconstruction were included in the analysis; 45 respondents without free-flap reconstruction were excluded.

Participant Characteristics

Australian survivors following free-flap reconstruction

Characteristic	Summary
Participants included	141
Age, years	64.2 (11.7)
Male	78 (61.4%)
Composite bone and soft-tissue free flap	61 (45.2%)
Soft-tissue-only free flap	74 (54.8%)
Time since head and neck cancer diagnosis, months	59.5 (27.0–86.8)
Time since head and neck reconstruction, months	44.0 (21.0–78.0)

Data are presented as n, mean (SD), n (%), or median (IQR). Percentages are based on available item-level responses; denominators may vary because of item non-response.

Table 1. Characteristics of participants who underwent free-flap reconstruction

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