

# Clinical and Quality of Life Outcomes after Radial Forearm vs. Anterolateral Thigh Free Flap Reconstruction of Glossectomy Defects: A Preliminary Examination

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## Background

- Quality-of-life measures, such as functional and patient reported outcomes (PROs), are important for assessing reconstructive outcomes.
- The anterolateral thigh (ALT) and radial forearm free flaps are two of the most common flaps used for glossectomy reconstruction.
- A comprehensive study evaluating multiple outcome measures, including FACE-Q, has yet to be performed comparing these two flaps.

## Objective

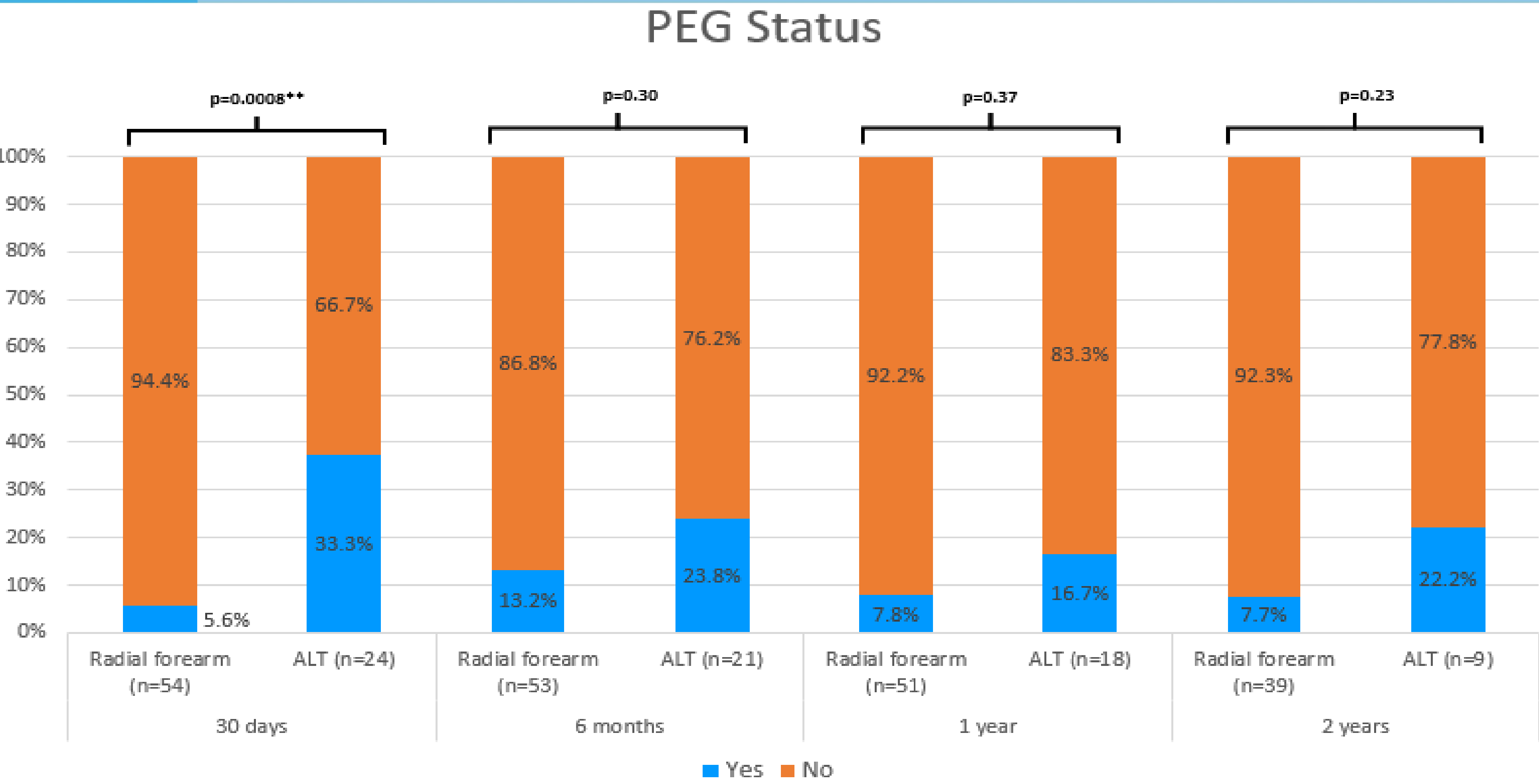
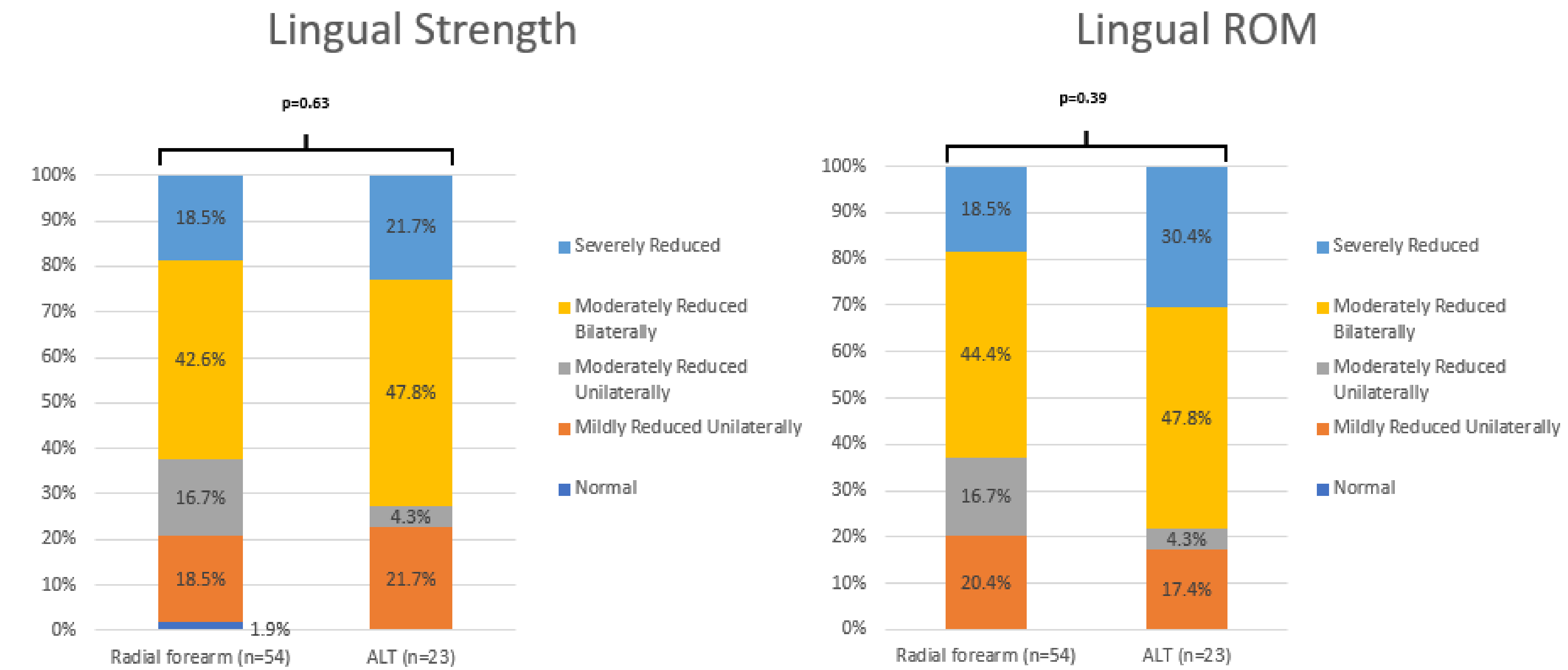
- Describe clinical, functional, and patient reported outcomes of ALT vs. radial forearm free flap glossectomy reconstruction

## Methodology

- Retrospective review of patients who underwent glossectomy with immediate reconstruction using radial forearm or ALT free flap.
- Evaluate clinical, Speech Language Pathology (SLP) functional, gastrostomy tube status, and FACE-Q PROs.
- Exclusion criteria:
  - Concurrent mandibulectomy
  - No outpatient follow-up with SLP.

## Results

| FACE-Q Scores by Flap Tissue Type |                |               |         |
|-----------------------------------|----------------|---------------|---------|
|                                   | Radial Forearm | ALT           | p-value |
| Sample size                       | 38             | 8             |         |
| Appearance Scale                  |                |               |         |
| Appearance of Face Overall        |                |               | 0.853   |
| Mean ± SD                         | 84.3 ± 21.8    | 84.3 ± 34.6   |         |
| Median (IQR)                      | 100 (87, 100)  | 100 (89, 100) |         |
| Function scales                   |                |               |         |
| Eating and Drinking               |                |               | 0.163   |
| Mean ± SD                         | 70.1 ± 24.3    | 56.0 ± 27.1   |         |
| Median (IQR)                      | 67 (50, 96)    | 55(39, 67)    |         |
| Oral Competence                   |                |               | 0.503   |
| Mean ± SD                         | 97.3 ± 9.6     | 88.9 ± 22.8   |         |
| Median (IQR)                      | 100 (100, 100) | 100 (94, 100) |         |
| Salivation                        |                |               | 0.270   |
| Mean ± SD                         | 66.6 ± 24.8    | 77.6 ± 26.5   |         |
| Median (IQR)                      | 67 (47, 83)    | 86 (63, 100)  |         |
| Smiling                           |                |               | 0.201   |
| Mean ± SD                         | 92.5 ± 16.1    | 76.6 ± 34.6   |         |
| Median (IQR)                      | 100 (100, 100) | 94 (68, 100)  |         |
| Speaking                          |                |               | 0.163   |
| Mean ± SD                         | 65.6 ± 25.8    | 47.4 ± 26.7   |         |
| Median (IQR)                      | 63 (47, 94)    | 51 (36, 59)   |         |
| Swallowing                        |                |               | 0.053   |
| Mean ± SD                         | 78.1 ± 26.4    | 54.5 ± 38.9   |         |
| Median (IQR)                      | 93 (53, 100)   | 59 (21, 87)   |         |



| Outcome                     | Radial Forearm (n=54) | ALT (n=24)  | p-value |
|-----------------------------|-----------------------|-------------|---------|
| Readmission, n (%)          | 9 (16.67%)            | 3 (12.5%)   | 0.745   |
| Return to OR, n (%)         | 6 (11.11%)            | 4 (16.7%)   | 0.487   |
| Anastomotic revision, n (%) | 0 (0%)                | 1 (4.2%)    | 0.085   |
| All-cause mortality, n (%)  | 11 (20.37%)           | 10 (41.67%) | 0.059   |

## Conclusions

- Glossectomy is a morbid procedure that confers high likelihood of post-operative disability.
- ALT patients may have worse swallowing function and were more likely to need a PEG tube in the short-term postoperative period
- Both flaps are viable options for glossectomy reconstruction.

## References

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