



# Factors influencing number of posttreatment visits following major head and neck oncologic surgery in the elderly

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## Introduction

Often, patients that present with head and neck squamous cell carcinoma (HNSCC) are in the seventh decade of life. The incidence of newly diagnosed HNSCC in the elderly is expected to increase by more than 60% by the year 2030. Optimizing postoperative care is vital for patients as they recover from major head and neck surgery to avoid complications, minimize hospital readmissions, decrease healthcare expenditure, and to surveil for recurrence.

The aim of this study is to identify patient factors associated with an increased number of posttreatment visits in the first year after major head and neck oncologic surgery in the elderly.

## Methods

Retrospective chart review of patients 60 years or older with HNSCC of the aerodigestive system who underwent ablative head and neck surgery with at least a neck dissection with or without a free flap reconstruction between 2009-2019 at a single tertiary care was performed. The following were collected:

- Gender
- Marital status
- BMI
- Smoking/alcohol status
- Tumor characteristics
- Perioperative course
- Surgery type
- Adjuvant therapy
- Complications
- Postoperative SNF placement
- Gastric tube presence
- Tracheotomy presence

Our outcome measure was the number of posttreatment visits in the first year following surgery.

Table 1. Patient Demographics

| Characteristic                                   | Numbers        | Percentage |
|--------------------------------------------------|----------------|------------|
| Age (mean)                                       | 71.01 +/- 7.38 |            |
| Gender                                           |                |            |
| Male                                             | 127            | 66.84%     |
| Female                                           | 63             | 33.16%     |
| Marital Status                                   |                |            |
| Partner                                          | 102            | 53.40%     |
| No partner                                       | 89             | 46.59%     |
| Weight loss >10 pounds prior to surgery          |                |            |
| No                                               | 113            | 59.16%     |
| Yes                                              | 78             | 40.84%     |
| Smoking Status                                   |                |            |
| Never                                            | 48             | 25.13%     |
| Former                                           | 115            | 60.21%     |
| Current                                          | 28             | 14.66%     |
| Alcohol Status                                   |                |            |
| Never                                            | 95             | 50.00%     |
| Former                                           | 20             | 10.53%     |
| Current                                          | 75             | 39.47%     |
| Recurrent disease                                |                |            |
| No                                               | 155            | 81.15%     |
| Yes                                              | 36             | 18.85%     |
| ASA Status                                       |                |            |
| II                                               | 26             | 13.61%     |
| III                                              | 146            | 76.44%     |
| IV                                               | 19             | 9.95%      |
| Tumor Location                                   |                |            |
| Oral Cavity                                      | 122            | 63.87%     |
| Oropharynx                                       | 29             | 15.18%     |
| Larynx                                           | 31             | 16.23%     |
| Nasopharynx                                      | 2              | 1.05%      |
| Gland                                            | 7              | 3.66%      |
| Surgery Type                                     |                |            |
| Primary closure                                  | 45             | 23.56%     |
| Pedicle                                          | 10             | 5.24%      |
| Flap                                             | 89             | 46.60%     |
| Laryngectomy                                     | 47             | 24.61%     |
| Adjuvant Therapy                                 |                |            |
| No                                               | 75             | 39.27%     |
| CRT or RT                                        | 116            | 60.73%     |
| Perioperative Complications                      |                |            |
| No                                               | 137            | 71.73%     |
| Yes                                              | 54             | 28.27%     |
| Postoperative skilled nursing facility placement |                |            |
| No                                               | 159            | 83.25%     |
| Yes                                              | 32             | 16.75%     |

Table 2. Univariate Analysis, Predictors of increased number of posttreatment visits

| Characteristic (median, range)                   | Postop visits | p value |
|--------------------------------------------------|---------------|---------|
| Gender                                           |               |         |
| Male                                             | 6(4, 17)      | 0.3649  |
| Female                                           | 6(1,32)       |         |
| Marital Status                                   |               |         |
| Partner                                          | 6(1,19)       | 0.0311  |
| No partner                                       | 5(1,32)       |         |
| Weight loss >10 pounds prior to surgery          |               |         |
| No                                               | 6(0,19)       | 0.0118  |
| Yes                                              | 5.5(1,32)     |         |
| Smoking Status                                   |               |         |
| Never                                            | 6(2,19)       | 0.0022  |
| Former                                           | 6(4,32)       |         |
| Current                                          | 4(1,9)        |         |
| Recurrent disease                                |               |         |
| No                                               | 6(4,32)       | 0.0826  |
| Yes                                              | 7(2,19)       |         |
| Tumor Location                                   |               |         |
| Oral Cavity                                      | 6(1,19)       | 0.1955  |
| Oropharynx                                       | 5(1,11)       |         |
| Larynx                                           | 5(3,32)       |         |
| Nasopharynx                                      | 6.5(6,7)      |         |
| Gland                                            | 7(3,10)       |         |
| Surgery Type                                     |               |         |
| Primary closure                                  | 5(1,32)       | 0.0914  |
| Pedicle                                          | 6.5(3,12)     |         |
| Flap                                             | 6(5,19)       |         |
| Laryngectomy                                     | 6(1,14)       |         |
| Adjuvant Therapy                                 |               |         |
| No                                               | 6(1,13)       | 0.034   |
| Yes                                              | 7(0,32)       |         |
| Complications                                    |               |         |
| No                                               | 6(1,17)       | 0.2896  |
| Yes                                              | 6(0,32)       |         |
| Postoperative skilled nursing facility placement |               |         |
| No                                               | 6(1,32)       | 0.0077  |
| Yes                                              | 4.5(0,11)     |         |
| G tube Placement                                 |               |         |
| No                                               | 6(0,19)       | 0.0863  |
| Yes                                              | 7(2,32)       |         |
| Trach placement                                  |               |         |
| No                                               | 6(0,32)       | 0.1877  |
| Yes                                              | 6(1,14)       |         |

Table 3. Spearman Coefficient Predictors of increased number of posttreatment visits

|                | Postop visit r value | Post op visit p value |
|----------------|----------------------|-----------------------|
| Age            | -0.00772             | 0.9156                |
| Miles          | -0.20445             | 0.0046                |
| BMI            | 0.07076              | 0.3307                |
| Length of Stay | 0.00620              | 0.9323                |

## Results

Of 191 patients, the mean age was 71.01 +/- 7.4 years. Within a one-year postoperative period, on average patients had 6.35+/-3.5 clinic visits. Age, location of primary, and the extent of surgery were not factors in the number of postoperative visits.

### Factors associated with increased posttreatment visits:

- Having a partner (p=0.0311)
- Living closer to the hospital (p=0.0046)
- Not being an active smoker (p=0.0022)
- Being discharged to home versus SNF (p=0.0077)
- Receiving adjuvant therapy (p=0.034)

## Conclusions

- This study elucidates factors that may predict the likelihood that a patient makes posttreatment visits.
- Having support at home, not being an active smoker, and living closer to the hospital increases a patient's odds of making posttreatment visits.
- Age and extent of surgery were not factors associated with an increased number of posttreatment visits.

## Contact info

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