|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Author** | **Purpose** | **Study Design** | **Study population** | **N** | **Measurement tool of interest** | **Other measures used** | **Analyses** | **Symptom scoring** | **Main findings displayed** | **Data presented** | **Subgroup compare-son** |
| Townes, 2020 | Report long-term HNC patient reported symptoms | Prospective | HNC patients | 928 | MDASI-HN |  | Mann-Whitney U; uni/multivariate regression | MDASI: Symptom free (all ratings 0); Mild (all ratings <5 with at least one rating ≥ 1); Moderate (all ratings >7 with at least one rating ≥ 5); Severe (at least one rating ≥  7) | Figures (bar graphs) | Mean composite symptom scores; Mean symptoms and mean interference score by primary site; Mean symptoms and mean interference score by treatment |  |
| McDowell, 2020 | Compare QoL and symptom burden between patients treated with URT and BRT | Cross-sectional | Patients with tonsil cancer | 43 | MDASI-HN | EORTC QLQ-C30 | t-test, Fisher exact test, Wilcoxon rank sum; Tobit regression | MDASI Mean scores: average of 22 symptom items and average of 6 interference items. Symptom severity ranking: none-mild (0-4), moderate (5-6), severe (7-10) | Tables | EORTC QLQ-C30 and MDASI-HN summary scores; MDASI-HN severity ratings; MDASI-HN items ranked in order of magnitude of difference between URT and BRT | URT and BRT |
| Hutcheson, 2019 | Estimate rates of acute dysphagia and recovery after TORS and compare swallowing outcomes by TORS and RT | Case series study | Patients with oropharyngeal cancer (OPC) | 257 | MDASI-HN, MDADI | DIGEST (swallowing outcome assessment) | Logistic regression; Fisher exact test (compare TORS and RT); Poisson distribution |  | Tables, figures (line graph) | Least square means of MDASI-HN swallowing symptom severity at RT start, end and post 6 months (line graph) | TORS and RT |
| Tyler, 2019 | To evaluate long term global and site-specific HRQoL | Cross-sectional | Patient with sinonasal and nasopharyngeal malignancies | 114 | MDASI-HN | EQ5D VAS, ASBQ | Descriptive stats; Man-Whitney U test (compare symptom scores among different groups); Spearman's correlation coefficients; generalized linear regression | MDASI mean composite score | Tables, figures (correlations, heat maps, box plots) | Regression results (table); Correlation figure (EQ5D VAS vs MDASI-22 composite scores); Heat map (symptom burden of MDASI-HN items); Box plot (EQ5D VAS comparisons in patients who had better (<4) vs worse (>4) MDASI Drowsy items scores) | Drowsy item |
| Kamal, 2018 | To examine the relationship between self-reported symptom severity and oral intake in long-term HNC survivors | Retrospective chart abstraction | HNC survivors | 152 | MDASI-HN | FOIS (clinician graded) | Descriptive statistics; Correlations coefficients; Symptom clusters defined by hierarchal cluster analysis; FOIS scores regressed on MDASI-HN symptom items. | MDASI: Mild <5), moderate (5-7), severe (>7) | Tables, figures (stacked bar graphs, heat maps, correlations) | Mean individual MDASI-symptom items and interference ratings (regression coefficients); Percentage of patients with mild/mod/severe MDASI-HN symptoms (bar graphs); Heat maps; Correlations between MDASI-HN symptoms to FOIS scale (figure) |  |
| Eraj, 2017 | To characterize patient reported outcomes in older patients following definitive radiation therapy (RT) for oropharyngeal cancer (OPC) | Cross-sectional | Patients ≥65 years old at treatment for OPC with definitive RT | 79 | MDASI-HN |  | Descriptive statistics; uni/multivariate regression analysis with the aggregate MDASI-HN symptom items and with composite of the top 5 symptom items; hierarchal cluster analysis | *Patient grouping*: symptom free (all ratings 0), mild (all ratings <5), moderate (all ratings <7), and severe (at least one item with rating ≥ 7). *Individual item severity rating*: none (0), mild (1–4), moderate (5–6), and severe (≥7). | Tables, figures (heat maps) | Heat map of the proportion of patients experiencing each level of symptom severity for MDASI-HN items for the entire study cohort and for sub groups; Heat map of the severity ratings grouped by hierarchal cluster analysis of patients with dendrogram |  |
| Wong, 2017 | To examine the relationship between mandibular osteoradionecrosis (ORN) and chronic dysphagia in OPC survivors and to determine the perceived symptom burden associated with ORN | Retrospective | OPC survivors | 349 | MDASI-HN |  | Descriptive statistics; t-test to compare mean MDASI-HN summary scores between groups | MDASI mean summary scores | Figures (bar graphs) | Mean MDASI-HN scores by ORN status | ORN vs No ORN |
| Gunn, 2015 | To assess long-term patient reported outcomes (PROs) following definitive IMRT-based treatment for early stage carcinomas of the tonsillar fossa | Cross-sectional | Patients with tonsil cancer | 139 | MDASI-HN |  | Descriptive statistics, logistic regressions | MDASI: Symptom free (all symptom items rated 0), mild symptoms (all ratings <5), moderate symptoms (all items <7), or had any single symptom item rated severe (defined as any one item rated ≥7) | Tables, figures (heat maps) | Mean MDASI-HN symptom item ratings for study cohort (table); Proportion of patients experiencing each level of overall MDASI symptom severity by treatment group (table); Heat map of the proportion of patients experiencing each level of symptom severity for the entire study cohort (figure), for radiation alone (figure) and for radiation and systemic treatment (figure). | Treatment: RT, RT and chemo |
| Meng, 2012 | To determine whether acupuncture can prevent xerostomia among H&N patients undergoing radiotherapy | RCT | Patients with nasopharyngeal carcinoma undergoing RT | 86 | MDASI-HN, XQ |  | Linear mixed models, mean scores overtime |  | Tables, figures (line graphs) | XQ mean scores over time for acupuncture and control group (line graph); MDASI-HN mean scores over time for acupuncture and control group (line graph). |  |
| Gogineni, 2019 | To evaluate the efficacy and toxicity of treatment with OARExtreme-sparing SBRT, as well as the effects of treatment on patient-reported QoL | Retrospective | HNC patients treated with SBRT | 60 | MDASI-HN, MDADI, XQ |  | Overall survival and time to progression, and time to progression or death were calculated using the Kaplan-Meier Method | MDASI-HN Symptom scores range from 0-200 where 200 represents the most symptom interference with daily life. MDADI scores range from 0-100 where 100 represents the least interference with daily life | Tables, figures (Kaplan Meier curve, symptom scores) | Overall survival of patients after completion of SBRT by sites of recurrence (figure); MDASI symptoms scores, QoL scores and MDADI Subscale Scores (figure - individual patient scores plotted with smoothed fitted curve). | Site of recurrence |
| Ortigara, 2019 | To evaluate the association between trismus and other radiation-associated conditions with dysphagia-related QoL in patients who have undergone RT of H&N | Cross-sectional | HNC patients treated with RT | 88 | MDADI |  | Descriptive statistics; Binary logistic regression | MDADI scores stratified on each subscale:  0–20 = profound;  21–40 = severe;  41–60 = moderate;  61–80 = mild; and  81–100 = minimal | Tables | Mean MDADI domain scores according to demographic and clinical variables; Association between swallowing limitation evaluated by mean total MDADI score and clinical variables |  |
| Peng, 2018 | To explore the varying relationships among FACT, MDADI and SSQ instruments | Cross-sectional | H&N patients treated with RT | 363 | MDADI | FACT, SSQ | Descriptive statistics, Spearman’s correlation coefficient (between FACT and MDADI or SSQ), K-means cluster analysis | 5-point scale and summarized using total score (20-100) | Tables, Figures | Mean patient reported outcomes (table); Correlation scores between FACT and MDADI or SSQ scores; Optimal number of clusters with k-means cluster analysis using elbow criterion (figure, table); CLUSOPT analysis of 3 clusters (figure); Principle Component Analysis (figure) |  |
| Carmignani, 2018 | To analyze the relationships between QoL, swallowing and phonatory problems | Prospective | Patients with advanced stage HNSCC | 60 | MDADI | EORTC QLQ-C30, EORTC QLQ-H&N35, DHI, VHI | Descriptive statistics; uni/multivariate survival analysis; logistic regression | 5-point scale and summarized using total score (20-100) | Tables, figures (bar graph) | Mean scores of DHI, VHI and MDADI based on tumour site and time (table); Correlation between swallowing and voice problems (table); MDADI scores over time (bar graph) | Tumour site |
| Memtsa, 2017 | To investigate the associations among QoL, xerostomia and quantity of saliva in a sample of HNC patients who had received radiotherapy | Prospective | Patients with HNC | 60 | XQ | QLQ-C30, QLQ-H&N35 | Descriptive statistics, Pearson’s/Spearman's correlations, repeated measures analysis | XQ items each rated 0-10. Each item score was added and the sum was linearly transformed to produce a summary score from 0-100 | Figures (bar, line graphs) | Changes in XQ scores and salivary flow rates overtime (line graph) |  |
| Sapir, 2016 | To investigate the effects on patient-reported dysgeusia of doses to the oral cavity, salivary output, and patient-reported xerostomia | Prospective | Patients with stage 3-4 OPC | 73 | XQ | HNQOL, UWQOL | Logistic regression, generalized linear mixed model | XQ items each rated 0-10. Each item score was added and the sum was linearly transformed to produce a summary score from 0-100. | Tables | Odds ratios for severe dysgeusia via UWQOL and HNQOL tools per 10-point score increase in patient-reported XQ scores (table). |  |