

Supplementary Materials: Assessing Preferences in Patients with Head and Neck Squamous Cell Carcinoma: Phase I and II of Questionnaire Development

Pierluigi Bonomo, Alice Maruelli, Calogero Saieva, Katherine Taylor, Susanne Singer, Zaira Patelli, Simon Rogers, Davide Mattavelli, Christian Simon, Florian Scotté, Thiago Bueno de Oliveira, Barbara Murphy, Bethany Andrews Rhoten, Umberto Tassini, Marie Fallon, Ourania Nicolatu Gatidis, Noam Yarom, Cristiana Bergamini and Paolo Bossi

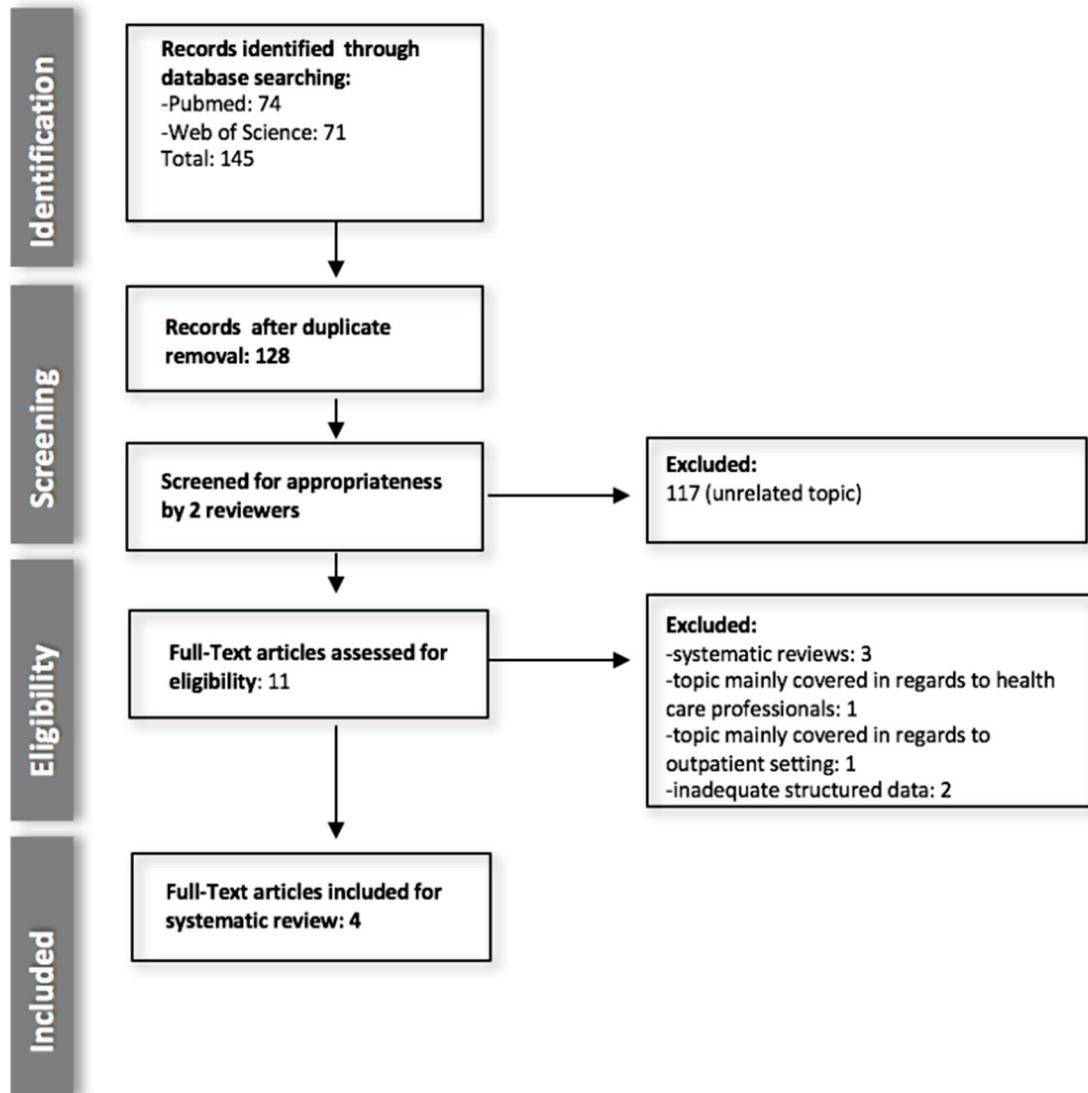


Figure S1. flow chart of literature search.

Table S1. significant associations between selected issues and treating center ($n = 109$; p -value from chi-square or Kendall tau B test).

| Issue | | Brescia (n = 32) | Florence (n = 10) | Milan (n = 22) | Mainz (n = 10) | Sao Paulo (n = 15) | Nashville (n = 20) | p-value from Chi-square (Kendall tau B) |
|-------|-------|---------------------|----------------------|-------------------|-------------------|-----------------------|-----------------------|--|
| n | score | n (%) | n (%) | n (%) | n (%) | n (%) | n (%) | |
| #1 | 2 | 0 (0) | 2 (20) | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 0.008 |
| | 3 | 1 (3.1) | 0 (0) | 2 (9.5) | 0 (0) | 1 (6.7) | 0 (0) | |
| | 4 | 31 (96.9) | 8 (80) | 19 (90.5) | 10 (100) | 14 (93.3) | 20 (100) | |
| #2 | 1 | 0 (0) | 1 (10) | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 0.049 |
| | 2 | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 1 (6.7) | 0 (0) | |
| | 3 | 2 (6.3) | 0 (0) | 5 (23.8) | 1 (10) | 2 (13.3) | 0 (0) | |
| | 4 | 30 (93.7) | 9 (90) | 16 (76.2) | 9 (90) | 12 (80) | 20 (100) | |
| #3 | 1 | 1 (3.1) | 1 (10) | 1 (5.3) | 1 (10) | 0 (0) | 1 (5) | 0.018 |
| | 2 | 6 (18.8) | 0 (0) | 5 (26.3) | 0 (0) | 1 (6.7) | 2 (10) | |
| | 3 | 5 (15.6) | 6 (60) | 6 (31.6) | 3 (30) | 1 (6.7) | 11 (55) | |
| | 4 | 20 (62.5) | 3 (30) | 7 (36.8) | 6 (60) | 13 (86.6) | 6 (30) | |
| #21 | 1 | 6 (18.8) | 1 (10) | 2 (10) | 0 (0) | 0 (0) | 3 (15.8) | 0.04 |
| | 2 | 6 (18.8) | 2 (20) | 8 (40) | 0 (0) | 1 (6.7) | 8 (42.1) | |
| | 3 | 7 (21.9) | 3 (30) | 5 (25) | 4 (40) | 9 (60) | 6 (31.6) | |
| | 4 | 13 (40.5) | 4 (40) | 5 (25) | 6 (60) | 5 (33.3) | 2 (10.5) | |
| #22 | 1 | 7 (21.9) | 0 (0) | 2 (10.5) | 1 (10) | 1 (6.7) | 1 (5.3) | 0.043 |
| | 2 | 3 (9.4) | 3 (30) | 4 (21.1) | 0 (0) | 1 (6.7) | 7 (36.8) | |
| | 3 | 7 (21.9) | 2 (20) | 7 (36.8) | 1 (10) | 8 (53.3) | 6 (31.6) | |
| | 4 | 15 (46.8) | 5 (50) | 6 (31.6) | 8 (80) | 5 (33.3) | 5 (26.3) | |
| #24 | 1 | 3 (9.4) | 1 (10) | 0 (0) | 0 (0) | 0 (0) | 4 (21.1) | 0.018 |
| | 2 | 3 (9.4) | 2 (20) | 5 (26.3) | 0 (0) | 3 (20) | 6 (31.6) | |
| | 3 | 7 (21.9) | 2 (20) | 9 (47.4) | 2 (20) | 4 (26.7) | 7 (36.8) | |
| | 4 | 19 (59.4) | 5 (50) | 5 (26.3) | 8 (80) | 8 (53.3) | 2 (10.5) | |
| #25 | 1 | 2 (6.3) | 0 (0) | 0 (0) | 1 (10) | 0 (0) | 0 (0) | 0.063 |
| | 2 | 4 (12.5) | 0 (0) | 4 (20) | 0 (0) | 1 (6.7) | 5 (26.3) | |
| | 3 | 6 (18.8) | 1 (10) | 6 (30) | 3 (30) | 5 (33.3) | 10 (52.6) | |
| | 4 | 20 (62.4) | 9 (90) | 10 (50) | 6 (60) | 9 (60) | 4 (21.1) | |
| #26 | 1 | 2 (6.5) | 0 (0) | 2 (10.5) | 0 (0) | 0 (0) | 3 (15.8) | 0.021 |
| | 2 | 5 (16.1) | 0 (0) | 5 (26.3) | 0 (0) | 1 (6.7) | 3 (15.8) | |
| | 3 | 10 (32.3) | 3 (30) | 5 (26.3) | 0 (0) | 9 (60) | 8 (42.1) | |
| | 4 | 14 (45.1) | 7 (70) | 7 (36.9) | 10 (100) | 5 (33.3) | 5 (26.3) | |
| #28 | 1 | 4 (12.9) | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 0.025 |
| | 2 | 0 (0) | 0 (0) | 5 (25) | 1 (10) | 0 (0) | 1 (5.6) | |
| | 3 | 5 (16.1) | 0 (0) | 2 (10) | 1 (10) | 1 (6.7) | 3 (16.7) | |
| | 4 | 22 (71) | 10 (100) | 13 (65) | 8 (80) | 14 (93.3) | 14 (77.7) | |

#1: cure of disease; #2: survival (live as long as possible); #3: no pain; #21: social role; #22: normal dental health; #24: social life; #25: respect of desires and dignity; #26: intimacy; #28: being thoroughly and sincerely informed about treatments' efficacy and survival expectation.

Table S2. descriptive analysis of clustered issues and their distribution by treatment subgroups (*p*-value from Kruskal-Wallis test).

| Issues: #6 + #13 + #14 | Curative (n = 30) | Follow-Up (n = 38) | Palliative (n = 20) | Cronbach's Alpha |
|---|----------------------|-----------------------|------------------------|---------------------|
| mean | 10.7 | 9 | 10.3 | |
| SD | 2.2 | 2.0 | 2.0 | |
| min | 3 | 4 | 6 | |
| max | 12 | 12 | 12 | |
| <i>p</i> -value from Kruskal-Wallis test | | | | 0.68 |
| all: <i>p</i> = 0.0001 follow-up vs palliative: <i>p</i> = 0.01 follow-up vs curative: <i>p</i> = 0.0001 palliative vs curative: <i>p</i> = 0.42 | | | | |
| Issues: #16 + #24 + #26 | Curative (n = 30) | Follow-Up (n = 36) | Palliative (n = 20) | Cronbach's Alpha |
| mean | 10.5 | 8.7 | 9.5 | |
| SD | 1.9 | 2.6 | 2.5 | |
| min | 6 | 3 | 4 | |
| max | 12 | 12 | 12 | |
| <i>p</i> -value from Kruskal-Wallis test | | | | 0.74 |
| all: <i>p</i> = 0.009 follow-up vs palliative: <i>p</i> = 0.25 follow-up vs curative: <i>p</i> = 0.002 palliative vs curative: <i>p</i> = 0.13 | | | | |

#6: ability to swallow; #13: normal breathing through mouth and nose; #14: burning mouth; #16: no depression; #24: social life; #26: intimacy.

Table S3. Distribution of issues analyzed separately as Likert-type data (frequencies, median, mode, range, IQR) and preferences (number, percentage) expressed by health care professionals.

| Score | 1 | | 2 | | 3 | | 4 | | 5 | | 6 | | 7 | | 8 | | 9 | | 10 | |
|------------|--------|------|--------|------|--------|------|--------|------|--------|------|--------|------|--------|------|--------|------|--------|------|--------|------|
| | n | % | n | % | n | % | n | % | n | % | n | % | n | % | n | % | n | % | n | % |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2.7 | 1 | 2.8 | 2 | 5.5 |
| 2 | 0 | 0 | 0 | 0 | 1 | 2.7 | 6 | 16.2 | 4 | 10.8 | 3 | 8.3 | 14 | 38.9 | 5 | 13.5 | 9 | 25 | 15 | 41.7 |
| 3 | 0 | 0 | 10 | 27 | 11 | 30.6 | 26 | 70.3 | 20 | 54 | 16 | 44.4 | 17 | 47.2 | 20 | 54 | 18 | 50 | 16 | 44.5 |
| 4 | 37 | 100 | 27 | 73 | 24 | 66.7 | 5 | 13.5 | 13 | 35.2 | 17 | 47.2 | 5 | 13.9 | 11 | 29.8 | 8 | 22.2 | 3 | 8.3 |
| Total | 37 | | 37 | | 36 | | 37 | | 37 | | 36 | | 36 | | 37 | | 36 | | 36 | |
| Median | 4 | | 4 | | 4 | | 3 | | 3 | | 3 | | 3 | | 3 | | 3 | | 2 | |
| Mode | 4 | | 4 | | 4 | | 3 | | 3 | | 4 | | 3 | | 3 | | 3 | | 3 | |
| Range | 0 | | 3–4 | | 2–4 | | 2–4 | | 2–4 | | 2–4 | | 2–4 | | 1–4 | | 1–4 | | 1–4 | |
| IQR | 0 | | 1 | | 1 | | 0 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | |
| preference | 33 | | 26 | | 28 | | 9 | | 26 | | 29 | | 10 | | 19 | | 10 | | 3 | |
| (%) | (89.2) | | (70.3) | | (77.8) | | (24.3) | | (70.3) | | (80.6) | | (27.8) | | (51.4) | | (27.8) | | (8.3) | |
| Answer | 11 | | 12 | | 13 | | 14 | | 15 | | 16 | | 17 | | 18 | | 19 | | 20 | |
| | n | % | n | % | n | % | n | % | n | % | n | % | n | % | n | % | n | % | n | % |
| 1 | 5 | 13.9 | 2 | 5.5 | 0 | 0 | 1 | 2.8 | 1 | 2.8 | 1 | 2.8 | 2 | 5.5 | 2 | 5.5 | 1 | 2.8 | 0 | 0 |
| 2 | 21 | 58.3 | 10 | 27.8 | 9 | 25 | 16 | 44.4 | 15 | 41.7 | 13 | 36 | 4 | 11.2 | 6 | 16.7 | 11 | 30.5 | 13 | 36.1 |
| 3 | 9 | 25 | 19 | 52.8 | 17 | 47.2 | 14 | 38.9 | 14 | 38.8 | 18 | 50 | 14 | 38.9 | 15 | 41.7 | 15 | 41.7 | 18 | 50 |
| 4 | 1 | 2.8 | 5 | 13.9 | 10 | 27.8 | 5 | 13.9 | 6 | 16.7 | 4 | 11.2 | 16 | 44.4 | 13 | 36.1 | 9 | 25 | 5 | 13.9 |
| Total | 36 | | 36 | | 36 | | 36 | | 36 | | 36 | | 36 | | 36 | | 36 | | 36 | |
| Median | 2 | | 3 | | 3 | | 3 | | 3 | | 3 | | 3 | | 3 | | 3 | | 3 | |
| Mode | 2 | | 3 | | 3 | | 2 | | 2 | | 3 | | 4 | | 3 | | 3 | | 3 | |
| Range | 1–4 | | 1–4 | | 2–4 | | 1–4 | | 1–4 | | 1–4 | | 1–4 | | 1–4 | | 1–4 | | 1–4 | |
| IQR | 1 | | 1 | | 2 | | 1 | | 1 | | 1 | | 1 | | 1 | | 2 | | 1 | |
| preference | 0 | | 7 | | 16 | | 4 | | 6 | | 4 | | 17 | | 11 | | 12 | | 7 | |
| (%) | (0) | | (19.4) | | (44.4) | | (11.1) | | (16.7) | | (11.1) | | (47.2) | | (30.6) | | (33.3) | | (19.4) | |
| Answer | 21 | | 22 | | 23 | | 24 | | 25 | | 26 | | 27 | | 28 | | | | | |
| | n | % | n | % | n | % | n | % | n | % | n | % | n | % | n | % | n | % | n | % |
| 1 | 1 | 2.8 | 3 | 8.3 | 5 | 13.9 | 1 | 2.8 | 1 | 2.7 | 3 | 8.1 | 3 | 8.1 | 2 | 5.4 | | | | |

| | | | | | | | | | | | | | | | | |
|-----------------------|-----------|------|-----------|------|-----------|------|----|-----------|----|-----------|----|-----------|----|-----------|----|-----------|
| 2 | 13 | 36.1 | 22 | 61.2 | 18 | 50 | 6 | 16.7 | 2 | 5.4 | 13 | 35.2 | 13 | 35.2 | 3 | 8.1 |
| 3 | 14 | 38.9 | 8 | 22.2 | 13 | 36.1 | 21 | 58.3 | 15 | 40.5 | 15 | 40.5 | 13 | 35.2 | 10 | 27.1 |
| 4 | 8 | 22.2 | 3 | 8.3 | 0 | 0 | 8 | 22.2 | 19 | 51.4 | 6 | 16.2 | 8 | 21.5 | 22 | 59.4 |
| Total | 36 | | 36 | | 36 | | | 37 |
| Median | 3 | | 2 | | 2 | | | 3 | | 4 | | 3 | | 3 | | 4 |
| Mode | 3 | | 2 | | 2 | | | 3 | | 4 | | 3 | | 2 | | 4 |
| Range | 1–4 | | 1–4 | | 1–3 | | | 1–4 | | 1–4 | | 1–4 | | 1–4 | | 1–4 |
| IQR | 1 | | 1 | | 1 | | | 0 | | 1 | | 1 | | 1 | | 1 |
| preference (%) | 5 | | 1 | | 2 | | | 8 | | 21 | | 4 | | 4 | | 17 |
| | (13.9) | | (2.8) | | (5.6) | | | (22.2) | | (56.8) | | (10.8) | | (10.8) | | (45.9) |

IQR: interquartile range.

Table S4. scoring criteria of issues according to the EORTC module development guidelines.

| Criteria | Scoring Criteria | Threshold | Score for Inclusion |
|----------|---|-----------|---------------------|
| 1 | Mean of patients' Likert score | > 2.0 | 1 |
| 2 | Mean of relevance to a specific patients' subgroup (curative intent subgroup; palliative intent subgroup; follow-up subgroup) | > 2.5 | 1 |
| 3 | >20% of the patients said yes to inclusion | > 20% | 1 |
| 4 | >30% of HCP said yes to inclusion | > 30% | 1 |

HCP: health care professionals.

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