

Proposed Modifications to the U.S. National Comprehensive Cancer Network’s Care Models for Advanced Cancers of the Head and Neck

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Introduction and Objective

- Patients with advanced cancers of the head and neck (ACHN) have painful and debilitating morbidity related to their illness^{1,2,3}
- ACHN “standards of care” involve adjunct treatment
- Adjunct treatment, such as radiation and/or chemotherapy, is resource-intensive and inaccessible in certain settings
- ENT surgeons face a complex decision-making process in settings where adjunct treatment is inaccessible
- Patients who lack access to adjunct treatment remain under-represented in literature and guidelines

Objective: Pilot study to garner opinion of surgeons practicing in Gauteng Province, South Africa who regularly manage ACHN

Investigation and Analysis

Structured interviews modelled after standard elucidations of clinical workflows in the field of health informatics.

Surgeons were to (1) accept, (2) reject, or (3) alter aspects of the U.S. National Comprehensive Cancer Network (NCCN)’s 2019 care models^{4,5}:

- A. Algorithmic starting points: the initial set of clinical parameters
- B. Algorithmic ending points: recommended final or references to other algorithms
- C. Algorithmic decision-making variables

Statistics and Analysis

- “Directed Content Analysis” approach described by Hsieh and Shannon in 2005⁶.
- One investigator (AK) standardized codes and categories with exemplars, from information collected from each participant.
- “Overall Opinion” metric = prevailing response amongst responding participants
- “Overall Opinion Strength” metric = $\frac{\text{Skew in opinion}}{\text{Total \# of responding participants}}$
- “Overall Opinion Strength” varies from 0.00 (perfect disagreement) to 1.00 (perfect agreement)
- Example: 4 “Necessary” and 2 “Unnecessary” responses.
 - “Mentioned By = 6/9 = 67%
 - “Overall Opinion” = “Necessary”
 - “Overall Opinion Strength” = (4-2)/4 = 0.50

Results

- Out of 15 potential participants from 5 different hospitals, 9 male participants from 3 hospitals consented and were interviewed
- 42 variables were mentioned in total. Only 16 of these (~39%) were mentioned by more than 3 participants.

Decision-Making Variable	Category	Mentioned By	Overall Opinion	Overall Opinion Strength
Objective QOL measure	QoL	89%	None	0.00
Family preferences	Non-Physical Resilience	56%	Unnecessary	0.20
Mental competence	Disability	67%	Unnecessary	0.33
Patient psychiatric co-morbidity	Physical Resilience	44%	Necessary	0.50
Medical competence	Disability	56%	Unnecessary	0.60
Patient’s own preferences	QoL	56%	Necessary	0.60
Patient’s religious beliefs	Non-Physical Resilience	56%	Necessary	0.60
Available treatment modalities	Resource Availability	67%	Unnecessary	0.67
Patient age	Physical Resilience	67%	Unnecessary	0.67
Presence of tumour invasion	HPI	67%	Unnecessary	0.67
Subjective QOL measure	QoL	67%	Necessary	0.67
Patient anatomy amenable to tracheostomy/gastrostomy	HPI	44%	Necessary	1.00
Patient cessation of alcohol/tobacco or willingness to pursue relevant cessation programme	Medical/Surgical History	44%	Necessary	1.00
Known patient genetics	HPI	100%	Unnecessary	1.00
Lesion histopathology	HPI	100%	Unnecessary	1.00
Size of lesion	HPI	100%	Unnecessary	1.00

Key Take-Aways

- All participants agreed that patient genetics, lesion histopathology, and lesion size were unnecessary to consider
- All who mentioned it agreed that patient anatomy and substance use/cessation were necessary to consider
- Participants were evenly divided on whether an objective QoL measure was necessary to consider
- Only a slim majority believed that family preferences and mental competence were unnecessary to consider

Discussion

- Minor overlap between the variables listed by individual participants
- **Agreement** observed for variables that directly related to treatment efficacy, or the pathophysiology of the cancer in question
- **Disagreement** observed for variables that implied value on the patient’s “worthiness”, or pitted patient’s values against the family or community’s values

Conclusion

- These results are valuable but not probative.
- More investigation is necessary before firm conclusions can be drawn, or specific revisions proposed to current guidelines



References

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6. H. Hsieh and S. Shannon, "Three Approaches to Qualitative Content Analysis," *Qualitative Health Research*, 2005.