Advanced Care Planning and Palliative Care are Underutilized Among Recurrent Head and Neck Cancer Patients

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INTRODUCTION

- There are 67,000 new cases of and 15,000 deaths due to head and neck cancer (HNC) in the US each year[1]
- Recurrence, death, and morbidities including loss of independence in speech, swallow, and breathing function are common[2-3]
- Median post-recurrence survival is 12 months[4]
- Advance care planning (ACP) includes, among others:
  - Advance directive (AD) = legal document stating a person's wishes for medical care and often names a surrogate medical decision maker
  - Physician's Orders for Life Sustaining Treatment (POLST) = portable medical order designed for those with life-threatening illnesses that informs providers of a patient's end-of-life care preferences
- NCCN and ASCO recommend early integration of PC at the time of or within 8-12 weeks of cancer diagnosis[5, 6]
- Early integration of palliative care (PC) and ACP for oncology patients promotes improved quality of life and mental health, less aggressive care at the end of life, decreased caregiver distress, lower healthcare costs, and improved concordance of care with patient wishes[7]
- The rates and timing of ACP and PC in patients with HNC in the US, and especially those with recurrent disease, are poorly understood[8]

METHODS

- Exempt approval from the USC IRB (UP-24-00639)
- Retrospective chart review of patients with recurrent HNC between 2016-2018 and ≥1 visit with otolaryngology at two tertiary care centers in Los Angeles, CA (one private academic hospital and one public hospital)
- Demographic information, HNC treatment and outcomes, and data regarding AD, POLST, PC visits, and documented Goals of Care Conversations (GoCC) were collected
  - GoCC = documented conversation between a physician, social worker, or care coordinator with the patient, family, or friends containing at least one of the following:
    - information regarding goals, values, and preferences that inform acceptable quality of life and treatment decisions
    - reference to AD/POLST
    - clearly name a surrogate or durable power of attorney
- Patients were considered deceased if there was EMR documentation of death, an online obituary with at least 2 matched identifiers, or the patient was discharged on hospice without subsequent documentation of healthcare utilization (death date estimated 1mo following last documented encounter)
- Statistical analysis conducted on R and GraphPad Prism 10
  - Unadjusted analysis: odds ratios (ORs) with 95% confidence intervals (CIs) derived from 2 × 2 contingency tables, p-values from chi-square
  - Analysis adjusted for sex, age, race/ethnicity, marital status, insurance, and primary language: Firth logistic regression
  - Hazard ratios (HR): Kaplan-Meier
  - P-values ≤0.05 considered significant

RESULTS

- 1,929 charts screened → 191 patients (171 deceased) from private hospital; 87 patients (64 deceased) from public hospital met inclusion criteria
- 87.3% of deceased patients had squamous cell carcinoma (SCC), 95.4% of which were HPV-
- Overall, 14.4% of patients had an AD, 13.8% had a POLST, 26.5% had at least one PC visit, and 50.8% had a documented GoCC
- PC visits
  - Initial PC visit was, on average, 19.4- and 10.2-months following diagnosis of recurrence and 9.78 and 18.7 weeks prior to death at the private and public hospital, respectively
  - 27.8% of private hospital patients and 36.7% of public hospital patients saw PC for the first time just 14 days or less prior to death
- GoCC
  - Initial GoCC was, on average, 10.5- and 11.4-months following diagnosis of recurrence and 26.9 and 29.6 weeks prior to death at the private and public hospital, respectively
  - 26.8% of private hospital patients and 19.6% of public hospital patients had their first GoCC just 14 days or less prior to death
- Most PC visits and GoCC occured inpatient
- Otolaryngologists initiated 7.61% (7 of 92) of initial GoCC

FIGURES & TABLES

Table 1: Cohort Demographics (Deceased Patients)

	N (%)		
	Private Academic Hospital N = 117	**Public Hospital N = 64**	**SD**
Age at recurrence, mean (SD)	66.6 (11.2)	58.4 (10.3)	0.76
Sex			
Male	78 (66.6)	45 (70.3)	0.08
Female	39 (33.3)	19 (29.7)	0.08
Race/Ethnicity			
White	62 (53.0)	2 (3.13)	1.33
Black/African American	6 (5.13)	8 (12.5)	0.26
Hispanic/Latino	20 (17.1)	30 (56.9)	0.90
Asian	17 (14.5)	13 (20.3)	0.15
Other or unknown	12 (10.3)	11 (17.2)	0.11
Marital Status			
Partnered	49 (41.9)	45 (70.3)	0.60
Not Partnered	65 (55.6)	18 (28.1)	0.58
Unknown	2 (2.56)	1 (1.56)	0.07
Preferred Language			
English	98 (83.8)	31 (48.4)	0.81
Spanish	12 (10.3)	24 (37.5)	0.67
Other	7 (5.98)	9 (14.1)	0.27
Insurance			
Private	51 (43.6)	0 (0.00)	1.24
Medicaid/Medicare	65 (55.6)	62 (96.9)	1.11
Other	1 (0.85)	2 (3.13)	0.16

SD = standardized difference

Figure 1: Palliative Care (PC) utilization among patients deceased due to recurrent HNC

(A) Kaplan-Meier plot of time between initial PC visit and death for patients now deceased due to recurrent HNC with at least one PC visit. **(B)** Histogram of weeks between initial PC visit and death, bin width = 4. **(C)** Bar graph representing setting of PC visits. **(D)** Bar graph representing services provided by PC specialist.

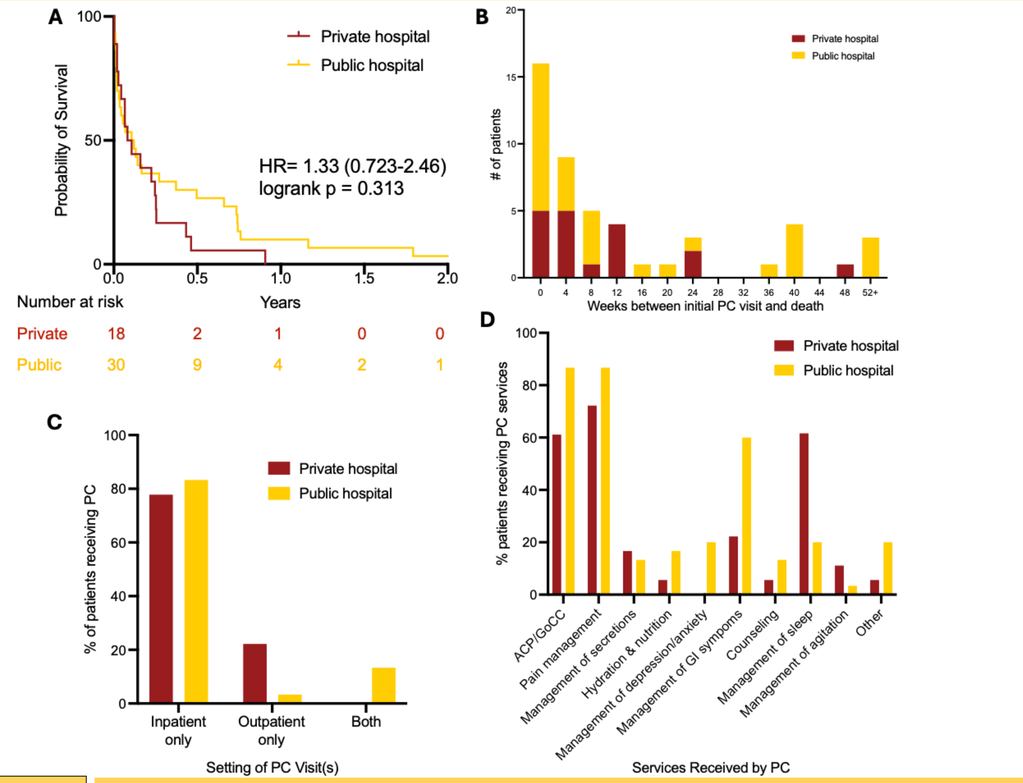


Table 2: Utilization of AD, POLST, PC, GoCC

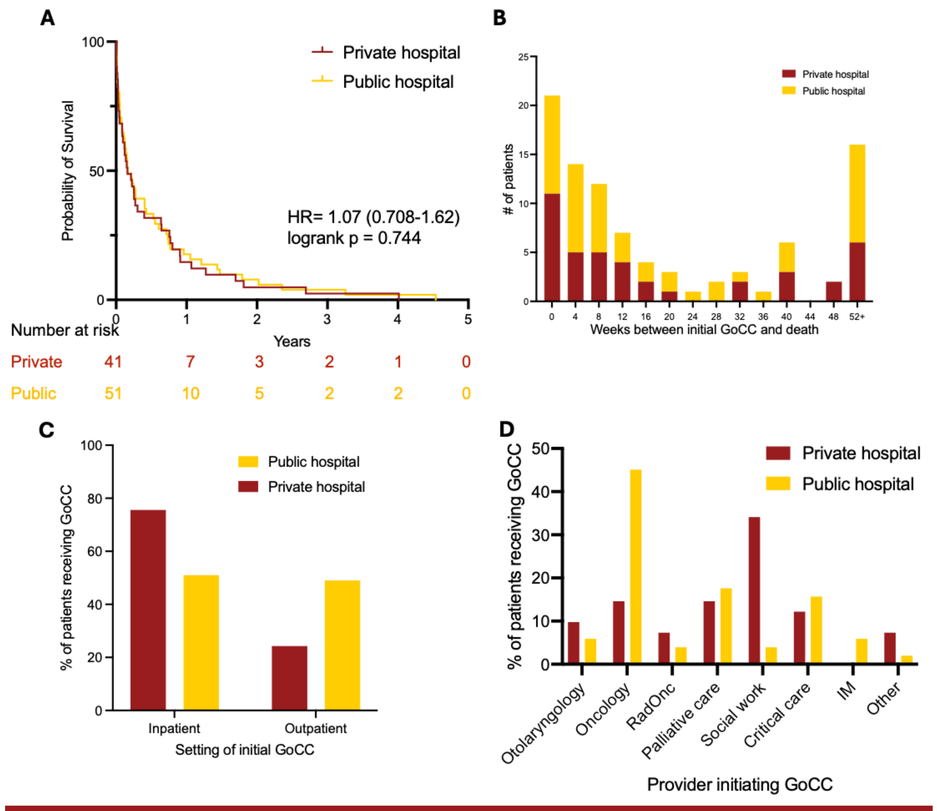
	N (%)				
	All Patients N = 181	**Private Academic Hospital N = 117**	**Public Hospital N = 64**	**Odds Ratio (95% CI)**	**P-value**
AD	26 (14.4)	23 (19.7)	3 (4.69)	4.975 (1.585-16.19)	**0.0060**
POLST	25 (13.8)	13 (11.1)	12 (18.8)	0.5417 (0.2254-1.240)	0.1544
≥1 PC Visit	48 (26.5)	18 (15.4)	30 (46.9)	0.2061 (0.1047-0.4072)	**<0.0001**
≥1 GoCC	92 (50.8)	41 (35.0)	51 (79.7)	0.1375 (0.0702-0.2845)	**<0.0001**

Table 3: Utilization of AD, POLST, PC, GoCC adjusted for demographic factors

	Odds Ratio (95% CI)	**P-value**
AD	3.88 (0.998 – 17.9)	0.0504
POLST	0.877 (0.268 – 2.69)	0.821
≥1 PC Visit	0.478 (0.19 – 1.15)	0.100
≥1 GoCC	0.373 (0.147 – 0.916)	**0.0313**

Figure 2: GoCC utilization among patients deceased due to recurrent HNC

(A) Kaplan-Meier plot of time between initial GoCC and death for patients now deceased due to recurrent HNC with at least one documented GoCC. **(B)** Histogram of weeks between initial GoCC and death, bin width = 4. **(C)** Bar graph indicating setting of initial documented GoCC. **(D)** Bar graph representing specialty of provider who initiated and led the initial documented GoCC



DISCUSSION & CONCLUSIONS

- ACP tools, such as AD, POLST, and GoCC, and palliative care are underutilized among patients with recurrent HNC ,despite high rates of morbidity and mortality
- When patient with recurrent HNC do received PC and GoCC, they occur late in the disease-course only after all other treatment options have been exhausted
- Most PC and GoCC occur inpatient when patients are less likely to be able to fully participate and benefit from these services
- Differences in hospital policy, culture, and documentation may impact the likelihood of patients to receive ACP
- Otolaryngologists are less likely to conduct GoCC and initiate PC, despite being a primary cancer care provider for these patients for months to years
- Future research should focus on:
  - Prospective studies to measure the value of PC
  - Identifying efficient and appropriate delivery models for PC and ACP in this vulnerable patient population
  - Training for otolaryngologists in ACP delivery and GoCC

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