Real-world treatment patterns among patients with unresected locally advanced squamous cell carcinoma of the head and neck (LA SCCHN) from community practices in the US

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SCOPE

- This study reports demographics, clinical characteristics, and treatment patterns among patients with unresected locally advanced squamous cell carcinoma of the head and neck (LA SCCHN) from community practices in the US
- Using electronic health record data abstracted for patients receiving care in The US Oncology Network clinics, this study provides insights on real-world treatment patterns among patients with LA SCCHN to help identify potential gaps in management

CONCLUSIONS

- Cisplatin-based chemoradiotherapy (CRT) remains the standard of care for patients with unresected LA SCCHN, highlighting the lack of progress in treatment options over the last 2 decades
- Additional studies are needed to provide novel and innovative treatments

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BACKGROUND

- Head and neck cancer, which refers to a group of cancers that occur in the oral cavity, larynx, nasopharynx, oropharynx, and hypopharynx, is the sixth most common cancer globally, with 891,453 new cases and 458,107 deaths reported in 2022[1]
  - In the US, head and neck cancer is the ninth most common cancer; as of September 2024, it was estimated that head and neck cancer was diagnosed in 71,100 people and caused 16,110 deaths in the US[2]
  - The majority of cases of head and neck cancer are squamous cell carcinomas (≈90%)[3]
- Approximately 60% of patients are diagnosed with LA SCCHN, and the standard of care is definitive CRT for patients with unresected disease, or surgical resection followed by adjuvant radiotherapy (RT) with or without chemotherapy (CT)[4]; Cisplatin has been the main chemotherapy in use for LA SCCHN for decades.
- In this analysis, we examine demographics, clinical characteristics, and treatment patterns among patients with unresected LA SCCHN from community oncology practices in the US

METHODS

Data source

- The US Oncology Network is one of the largest physician networks in the US, with >600 sites of care and >2,700 care providers, and treats approximately 15% of patients with cancer in the US
- Electronic health record data from iKnowMed were manually abstracted for patients receiving care in The US Oncology Network clinics
- Patients were diagnosed between January 2013 and April 2022 and were followed up until death or data cutoff in October 2022 (**Figure 1**)

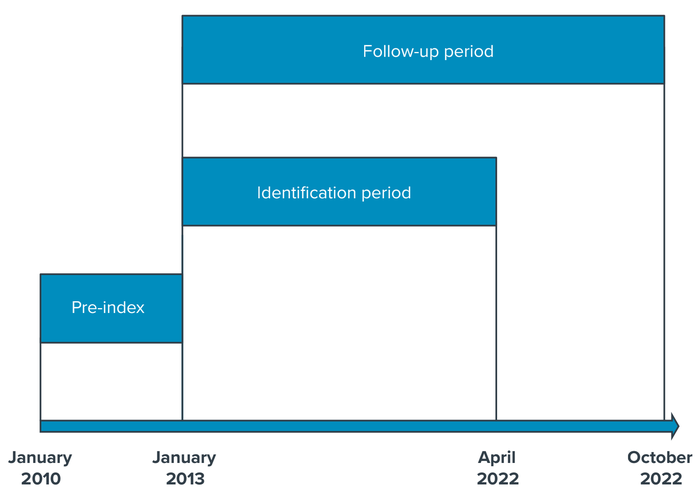
Inclusion criteria

- Patients diagnosed with American Joint Committee on Cancer (AJCC) 7 or 8 (depending on time period), stage III, IVA, or IVB LA SCCHN between January 2013 and April 2022 with a primary tumour site of the oral cavity, oropharynx, hypopharynx, or larynx
- Patients aged ≥18 years at first diagnosis of LA SCCHN
- Patients with ≥1 visit (or record of death) within The US Oncology Network following diagnosis

Exclusion criteria

- Patients who received surgery as the primary treatment for LA SCCHN (does not include salvage surgery after definitive nonsurgical treatment)
- Patients with a history of or treatment for another malignancy within the 3 years prior to diagnosis
- Patients with evidence of metastatic disease at any time prior to diagnosis
- Patients participating in a clinical trial

Figure 1. Study design



RESULTS

Patient characteristics

- Overall, 250 patients were included; baseline patient demographics are presented in **Table 1**
  - Mean age was 62.6 years; 80.0% of patients were men
  - Of patients with documented ethnicity (84.8%), 90.1% were White and 6.1% were Black
  - Disease was stage III in 33.2% of patients, stage IVA in 63.6%, and stage IVB in 3.2%
  - Cancer of the oropharynx was the most common (54.4%, of which 60.3% had HPV-positive status), followed by larynx (33.6%), hypopharynx (10.8%), and oral cavity (1.2%)
  - Of patients with known smoking status (91.6%), 73.8% were current or former smokers
  - Among patients with documented payer type (88.8%), Medicare (43.2%) and commercial (40.1%) were most common

Table 1. Patient demographics and clinical characteristics

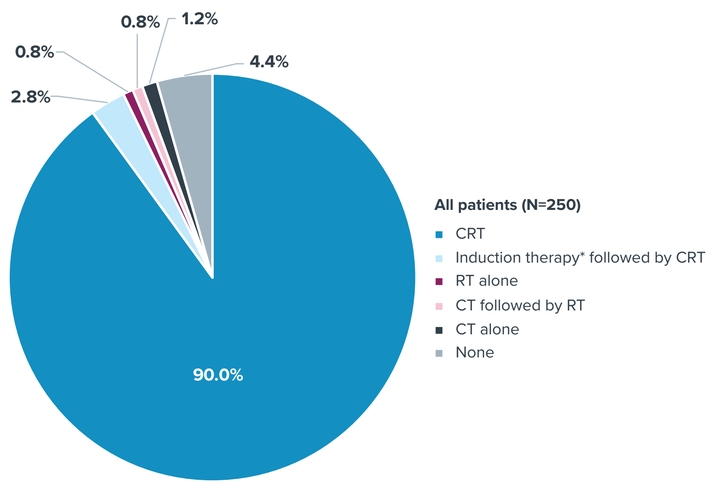
Variable	All patients (N=250)
Age, mean (SD), years	62.6 (9.3)
Sex, n (%)	
Male	200 (80.0)
Female	50 (20.0)
Race and ethnicity, n (%)	[N=212]
White/Caucasian	191 (90.1)
Black/African American	13 (6.1)
Other	8 (3.8)
Cancer stage , n (%)	
III	83 (33.2)
IVA	159 (63.6)
IVB	8 (3.2)
Cancer site, n (%)	
Oropharynx	136 (54.4)
HPV positive	82 (60.3)
HPV negative	30 (22.1)
Unknown HPV status	24 (17.6)
Larynx	84 (33.6)
Hypopharynx	27 (10.8)
Oral cavity	3 (1.2)
Tobacco use, n (%)	[N=229]
Current	68 (29.7)
Former	101 (44.1)
No history	60 (26.2)
Payer type, n (%)	[N=222]
Medicare	96 (43.2)
Medicaid	22 (9.9)
Commercial	89 (40.1)
Self-pay/cash	8 (3.6)
Other	7 (3.2)
Time from diagnosis to first treatment, median (range), months	1.3 (0.2–17.0)

HPV, human papillomavirus.

Treatment patterns

- The most common treatment regimens were CRT (90.0%), induction therapy followed by CRT (2.8%), CT alone (1.2%), RT alone (0.8%), and CT followed by RT (0.8%) (**Figure 2**)

Figure 2. Treatment patterns among all patients with unresected LA SCCHN

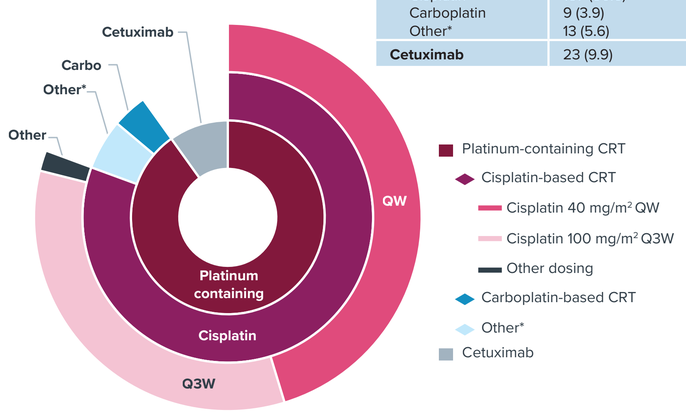


CRT, chemoradiotherapy; **CT,** chemotherapy; **LA SCCHN,** locally advanced squamous cell carcinoma of the head and neck; **RT,** radiotherapy.
*Induction therapy comprised CT alone (n=3 [1.2%]), RT alone (n=2 [0.8%]), and CT followed by RT (n=2 [0.8%]).

- Concurrent CRT was received by 232 of 250 patients (92.8%), which comprised CRT (225/250 [90.0%]) and induction therapy followed by CRT (7/250 [2.8%])
  - Of the 232 patients receiving CRT, 90.1% received platinum-based CT agents, including cisplatin-based CRT (80.6%), carboplatin-based CRT (3.9%), and other (5.6%) (**Figure 3**)
- Of patients receiving cisplatin-based CRT with known dosing information (184/187 [98.4%]), most received cisplatin 100 mg/m^2 every 3 weeks (42.4%) or cisplatin 40 mg/m^2 once weekly (57.1%)

Figure 3. Systemic components of CRT

Systemic agent, n (%)	Patients receiving CRT (N=232)
Platinum containing)	209 (90.1)
Cisplatin	187 (80.6)
Carboplatin	9 (3.9)
Other*	13 (5.6)
Cetuximab	23 (9.9)



Carbo, carboplatin; **CRT,** chemoradiotherapy; **Q3W,** every 3 weeks; **QW,** once weekly.
*Other comprised carboplatin + paclitaxel (n=5 [2.2%]), cisplatin + paclitaxel (n=5 [2.2%]), cetuximab + cisplatin (n=1 [0.4%]), cisplatin + docetaxel + fluorouracil (n=1 [0.4%]), and cisplatin + docetaxel (n=1 [0.4%]).

- Of patients with known RT type (150/237 [63.3%]), 95.3% received external beam RT; among these patients, intensity-modulated RT was the most common type (126/143 [88.1%]). The median dose in patients for whom the RT dose was reported was 70.0 Gy (**Table 2**)

Table 2. Radiotherapy type and dose

RT type	Patients with RT type available (n=150)
EBRT, n (%)	143 (95.3)
IMRT	126 (88.1)
PBT	1 (0.7)
Unspecified EBRT	16 (11.2)
Other, n (%)	7 (4.7)
RT dose, Gy	**Patients with RT dose available (n=200)**
Mean (SD)	63.1 (12.4)
Median (min, max)	70.0 (0.7, 77.0)

EBRT, external beam radiotherapy; **IMRT,** intensity-modulated radiotherapy; **PBT,** proton beam therapy; **RT,** radiotherapy.

Limitations

- iKnowMed, the source of the electronic health record data, is limited to community oncology clinics within The US Oncology Network
- iKnowMed is predominantly used by medical oncologists; however, linkage between sites of care is possible once a patient enters the network

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