# Real-world treatment patterns of elderly patients with locally advanced squamous cell carcinoma of the head and neck in the US

## SCOPE

- We report baseline demographics, clinical characteristics, and treatment patterns in elderly patients with newly diagnosed locally advanced squamous cell carcinoma of the head and neck (LA SCCHN) using data from the Surveillance, Epidemiology, and End Results (SEER)–Medicare linked database to better understand real-world clinical treatment practice in the US

### CONCLUSIONS



- Real-world management of elderly patients with LA SCCHN most often includes concurrent adjuvant or definitive chemoradiotherapy (CRT) with cisplatin
- However, in this database analysis, 17% of patients did not receive any treatment; reasons for this are unknown but may include patient preference or concerns with treatment toxicities
- These data highlight a need for innovative and effective therapies for elderly patients and beyond with LA SCCHN

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## - BACKGROUND

- are squamous cell carcinomas<sup>2</sup> Approximately 60% of patients are diagnosed with LA SCCHN,<sup>3</sup> and standard of care is definitive CRT for unresected patients, or surgery followed by adjuvant radiotherapy (RT) with or without chemotherapy (CT)<sup>3</sup> • To understand real-world clinical treatment practices, we assessed the treatment patterns in elderly
- patients with newly diagnosed LA SCCHN in the US population using data from the SEER–Medicare linked database

### **RESULTS**

### Patient demographics

- A total of 2,776 patients met the eligibility criteria (**Figure 2**) • Patient demographics for the overall population and subgroups are presented in Table 1
- In the overall population: Mean patient age was 73.6 years (standard deviation, 6.8 years), and 74.0% and 26.0% were male and female, respectively
- Patients' race and ethnicity were reported as follows: 88.7% were White, 6.9% were Black, and 2.9% were Asian
- Cancer was stage III in 27.1% of all patients, stage IVA in 65.9%, and stage IVB in 7.0%
- Cancer of the oropharynx was the most common tumor type (48.6%), followed by oral cavity (25.1%), larynx (20.3%), and hypopharynx (5.9%)

### Figure 2. Flow diagram of patient selection

9,926 patients aged ≥66 years with first-time diagnosis of head and neck cancer in 2014-2017 with ≥1 year of Medicare eligibility prior to diagnosis and no other prior cancers 6,854 patients excluded: Did not have stage III, IVA, or IVB disease (n=6,556) Did not have squamous histology (n=1,525) 3,072 patients with locally advanced squamous cell carcinoma of the head and neck 296 patients excluded: Did not have cancer site of interest

2,776 patients with a primary cancer site of oropharynx, oral cavity, larynx, or hypopharynx

a tistics review (CSR) 1975-2018. Accessed March 28, 2023. https://www.nccn.org/professionals/physician\_gls/pdf/head-and-neck.pdf. 4. Ann MJ, et al. Oral Oncol. 2014;25:2101-15. 3. NCCN Clinical Practice Guidelines in Oncol. 2014;25:2101-15. 3. NCCN Clinical Practice Guidelines in Oncol. 2016;53:10-6. et al. Ann MJ, et al. Oral Oncol. 2014;25:2101-15. 3. NCCN Clinical Practice Guidelines in Oncol. 2016;53:10-6. et al. Oral Oncol. 2014;25:2101-15. 3. NCCN Clinical Practice Guidelines in Oncol. 2016;53:10-6. et al. Ann MJ, et al. Oral Oncol. 2016;53:10-6. et al. Ann Oncol. 2014;25:2101-15. 3. NCCN Clinical Practice Guidelines in Oncol. 2014;25:2101-15. 3. NCCN Clinical Practice Guidelines in Oncol. 2016;53:10-6. et al. Ann MJ, et al. Oral Oncol. 2016;53:10-6. et al. Ann MJ, et al. Oral Oncol. 2016;53:10-6. et al. Oral Oncol. 2016;53:10-6. et al. Ann MJ, et al. Ann MJ, et al. Oral Oncol. 2016;53:10-6. et al. Oral On 1 and neck cancers. Accessed March 28, 2023. https://www.cancers. Acce 100009945). Medical writing support was provided by the healthcare business of Merck KGaA, Darmstadt, Germany (CrossRef Funder ID: 10.13039/100009945). Hedical writing support was provided by the healthcare business of Merck KGaA, Darmstadt, Germany (CrossRef Funder ID: 10.13039/100009945).

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In the US, head and neck cancer is the ninth most commonly diagnosed cancer, with 66,630 new cases and 14,620 deaths recorded in 2021<sup>1</sup>

• The majority of cases of head and neck cancer (≈90%)

## • METHODS • Ê



- Real-world data were extracted from the SEER–Medicare linked database
- Data from the SEER database include demographic, clinical, and cause-of-death information from several US cancer registries
- Medicare data include claims for covered healthcare services
- Personal identifiers were matched between the databases, providing comprehensive medical data for all selected patients
- Due to Medicare eligibility criteria, only patients aged ≥65 years were included in the linked database

### Table 1. Patient demographics at base

	All patients (N=2,776)	Definitive non-surgical treatment (n=1,487)	Primary resection (n=753)
Age, mean (SD), years	73.6 (6.8)	73.3 (6.7)	73.7 (6.6)
<b>Age, years, n (%)</b> 66-69 70-74 75-79 80-84 ≥85	976 (35.2) 800 (28.8) 494 (17.8) 273 (9.8) 233 (8.4)	549 (36.9) 422 (28.4) 277 (18.6) 127 (8.5) 112 (7.5)	251 (33.3) 233 (30.9) 120 (15.9) 85 (11.3) 64 (8.5)
<b>Sex, n (%)</b> Male Female	2,055 (74.0) 721 (26.0)	1,145 (77.0) 342 (23.0)	490 (65.1) 263 (34.9)
Race and ethnicity, n (%) White Black Asian Other	2,461 (88.7) 191 (6.9) 80 (2.9) 44 (1.6)	1,321 (88.8) 99 (6.7) 40 (2.7) 27 (1.8)	689 (91.5) 36 (4.8) NR NR
<b>Disease stage, n (%)</b> III IVA IVB	752 (27.1) 1,829 (65.9) 195 (7.0)	416 (28.0) 962 (64.7) 109 (7.3)	198 (26.3) 523 (69.5) 32 (4.2)
Cancer site, n (%) Oropharynx Oral cavity Larynx Hypopharynx	1,349 (48.6) 698 (25.1) 564 (20.3) 165 (5.9)	877 (59.0) 146 (9.8) 349 (23.5) 115 (7.7)	258 (34.3) 402 (53.4) 82 (10.9) 11 (1.5)

A total of 63 patients received CT alone, and 473 patients received no treatm suppressed to comply with NCI privacy rules. CT, chemotherapy; NR, not reported.





- The study design is presented in **Figure 1**
- Patients were diagnosed between January 2014 and December 2017 and were followed up until diagnosis of subsequent cancer, change in enrollment in Medicare, death, or data cutoff in December 2019 (most recent data available for this analysis)
- Patients were divided into subgroups based on types of anticancer treatment received, and descriptive analyses were conducted
- As deidentified patient data were used, no ethical consent was required





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ent. Valu	es <11 or that ca	an be calculated	to be <11 are

- patients (n=1,487)

- No treatment was received by 17% of patients (n=473)
- had primary resection with adjuvant CRT
- with adjuvant CRT

### Figure 3. Treatment patterns for all patients



Definitive non-surgical treatment (n=1,487)	n (%)	Primary resection (n=753)	n (%)
CRT alone	1,076 (72.4)	Surgery followed by CRT	276 (36.7)
RT alone	289 (19.4)	Surgery alone	231 (30.7)
CT followed by RT	102 (6.9)	Surgery followed by RT	221 (29.3)
RT followed by CT	20 (1.3)	Other	25 (3.3)

CRT, concurrent chemoradiotherapy; CT, chemotherapy; LA SCCHN, locally advanced squamous cell carcinoma of the head and neck; RT, radiotherapy.

### Limitations

Cetuximab Paclitaxel + Carboplatin

Systemic therapy received

Due to data lag, the latest available data are from 2019

cisplatin, docetaxel, docetaxel + carboplatin, docetaxel + cisplatin, fluorouracil + cisplatin, and paclitaxel + cisplatir

• The study included patients aged  $\geq 66$  years; the population may not be representative of the wider LA SCCHN population

Cetuximab Paclitaxel + Carboplatin Other

Systemic therapy received