Targeted Therapy and Treatment Trends in Locally Advanced Head and Neck Cancer in Taiwan: A Population-Based Retrospective Study

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Objectives

- Taiwan's National Health Insurance has covered targeted therapy, namely cetuximab, for locally advanced head and neck cancer (LAHNC) since July 2009
- Aims: to estimate trends of first-course treatment modalities before and after cetuximab was reimbursed and examine factors associated with targeted therapy among patients with LAHNC

Methods

- A population-based retrospective study utilizing Taiwan's National Health Insurance Research Database was conducted
- Patients newly diagnosed with LAHNC during 2008-2016 and received treatments within six months were included and divided into three groups: 1) being diagnosed during 2008-2010; 2) nontargeted therapy group since 2011; 3) targeted therapy group since 2011 (**Figure 1**)
- The Cochran-Armitage trend test was performed to evaluate treatment trends; treatment selection factors were estimated using the multiple logistic regression

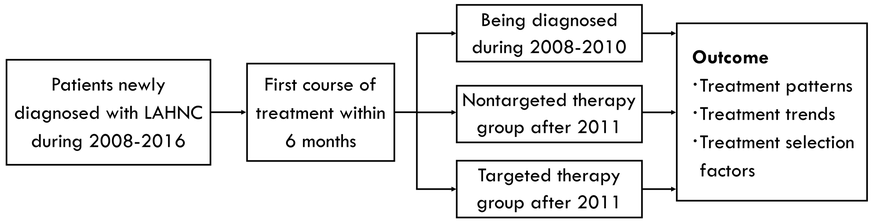

Figure 1. Conceptual framework of study design

Results

- 23,448 patients were included in the study (group 1: 6,661; group 2: 15,422; group 3: 1,365)
- Around 230 (8.2%) patients received targeted therapy each year, increasing from 2011 to 2016 ($p = 0.02$)

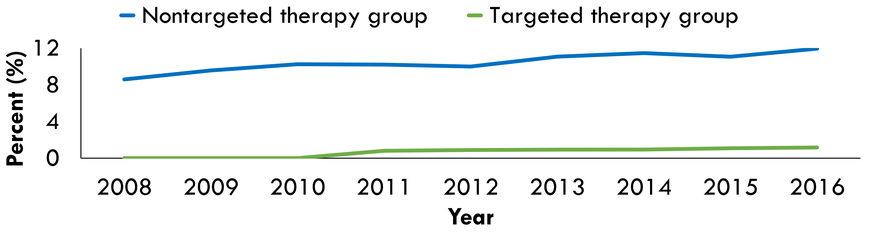

Figure 2. Treatment trends from 2008 to 2016

- Most (91.1%) patients in the targeted therapy group also received radiotherapy while only 24.9% of them were given surgery, showing significant differences from the nontargeted therapy group (surgery: 62.3%; radiotherapy: 73.8%; $p < 0.001$)
- Older patients with more comorbidities tended to receive targeted therapy
- Patients with hypopharynx and oropharynx cancers were more likely to receive targeted therapy compared to oral cavity cancer (OR[95% CI]: 2.76 [2.40-3.18]; $p < 0.001$)

Conclusion

- Treatment patterns between nontargeted and targeted therapy groups differed significantly
- Most patients did not receive targeted therapy even after cetuximab was reimbursed
- Further studies evaluating the effectiveness of targeted therapy were needed