Real-World Overall Survival (OS) in Recurrent/Metastatic Nasopharyngeal Carcinoma (R/M NPC) in Asia: A Literature Review

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Conclusions

- **This literature review (LR) found limited real-world (RW) immuno-oncology (IO) use in recurrent/metastatic nasopharyngeal carcinoma (R/M NPC), likely reflecting access to recently introduced/approved IO compounds**
- **In most cases, only 1 or 2 studies were available to provide data on IO as a point of comparison against chemotherapy (CT)-based modalities, which may not be representative of all patients receiving IO in the RW**
- **Comparisons of overall survival (OS) between modalities must be interpreted with caution due to differences in study design and patient selection characteristics between modalities (eg, type of metastasis) which could have confounded OS outcomes**
- **The heterogenous evidence base made overarching conclusions challenging, and highlights a need for long-term RW research in R/M NPC patients, particularly in parts of Asia outside mainland China, to better understand the benefits of novel treatments such as IO**
- **Nevertheless, the RW OS results complement randomized clinical trial (RCT) data to provide an initial indication of a potential role for IO in R/M NPC treatment**

Background

- Platinum-based CT ± radiotherapy (RT) was the standard of care for R/M NPC until the recent introduction of IO therapy
- Meta-analyses (MAs) of RCTs report mixed results for IOs;[1,2] adding toripalimab/tislelizumab/camrelizumab to CT improved efficacy of first-line (LOT 1) treatment, while pembrolizumab was non-superior to CT in the later-line (LOT 2+) setting[3,4]
- An evidence gap was identified regarding data on current RW usage and effectiveness of standard-of-care treatments and IO therapies in R/M NPC
- This targeted LR thus aimed to summarize RW treatments and OS for patients with R/M NPC in Asia

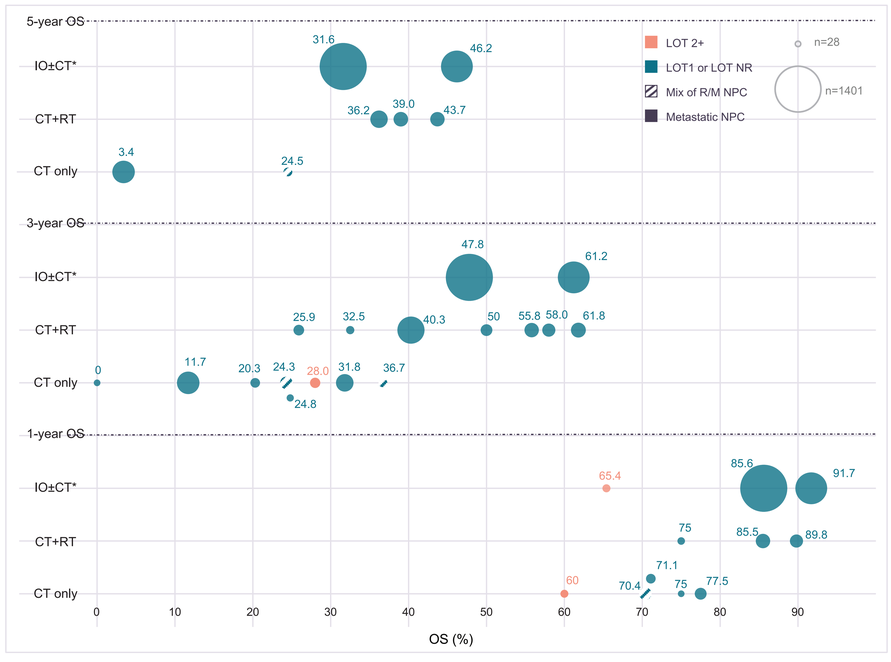
Methods

- MEDLINE and Embase (2020–April 25, 2023) were searched simultaneously via the Ovid SP platform. Recent proceedings (2021–2023) of the American Society of Clinical Oncology (ASCO) and European Society for Medical Oncology (ESMO) congresses were also searched, in addition to the bibliographies of systematic LRs/MAs
- Observational studies were eligible if they reported treatment patterns (CT±RT or IO) and OS of patients with R/M NPC in Asia
- Records were screened by a single reviewer and eligible studies from each identified institution were prioritized for extraction based on outcomes reported per treatment modality, sample size, and recency. Information on the study and patient characteristics, treatments, and associated OS was extracted
- The study focused specifically on OS to provide a point of comparison across RW data where reporting and definitions of outcomes (eg, progression-free survival) could vary substantially
- OS was descriptively analyzed, stratified by line of and types of treatment, as well as recurrent or metastatic disease

Results

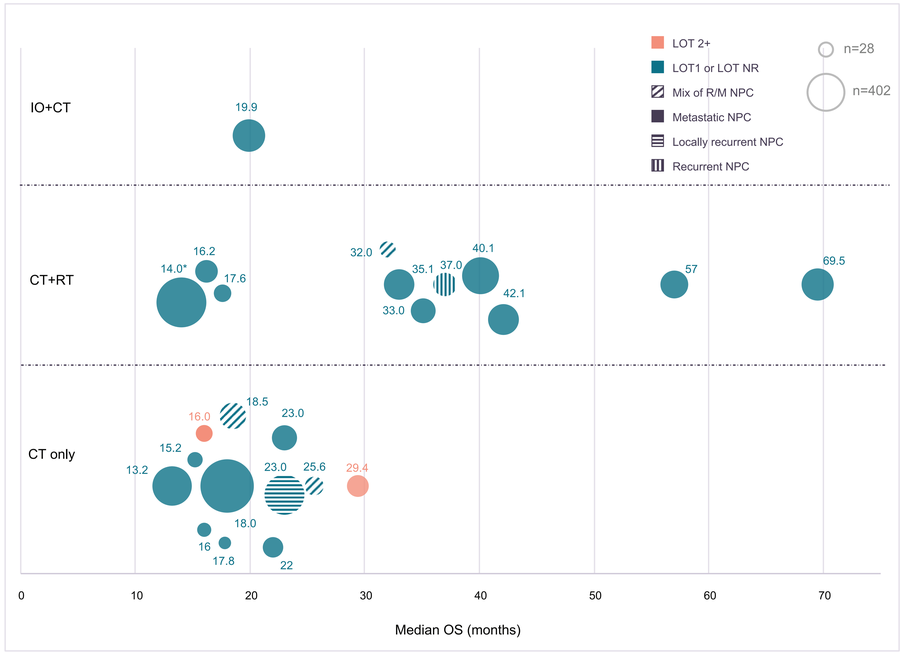
- Of 5210 abstracts retrieved and 486 full texts reviewed, 24 articles were eligible. Of these, 20 prioritized studies were extracted
- Most studies (18/20, 90%) were from mainland China. Patient characteristics (eg, performance status, Epstein-Barr virus [EBV] status, age, sex) were similar between studies, where reported
- CT-based modalities were most common, and only mainland China reported studies with IO (n=3)
- **Figure 1** presents OS values at 1, 3, and 5 years, which show a general trend of reduced OS over time. In CT-only patients, OS decreased sharply after 1 year, compared with patients who received CT followed by RT (CT+RT) or IO±CT. IO studies showed a similar range of OS to CT+RT studies at 1, 3, and 5 years, which was higher than CT-only studies across LOTs
- **Figure 2** reports median OS by treatment type. Currently, a single study is available for IO+CT, which limits meaningful comparison with other treatment modalities

Figure 1. OS in R/M NPC by Treatment Modality and LOT



Each bubble represents an included study; bubbles are sized to scale according to individual study sample sizes. Median duration of follow-up ranged from 7–71.5 months, where reported.
*Studies in LOT1 used IO+CT; studies in LOT2 used IO-only; studies where LOT was NR used IO±CT targeted/local therapy.
CT, chemotherapy; IO, immuno-oncology; LOT, line of therapy; NR, not reported; OS, overall survival; R/M NPC, recurrent/metastatic nasopharyngeal carcinoma; RT, radiotherapy.

Figure 2. Median OS in R/M NPC by Treatment Modality and LOT



Each bubble represents an included study; bubbles are sized to scale according to individual study sample sizes.
Median duration of follow-up ranged from 17.7–112 months, where reported.
*9.4% of patients received CT+RT; 90.6% of patients received concurrent chemoradiotherapy.
CT, chemotherapy; IO, immuno-oncology; LOT, line of therapy; NPC, nasopharyngeal carcinoma; NR, not reported; OS, overall survival; R/M, recurrent/metastatic; RT, radiotherapy.

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