

Dissemination patterns and chronology of distant metastasis affect survival of patients with head and neck squamous cell carcinoma

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Introduction

- In patients with head and neck squamous cell carcinoma (HNSCC), patients with fewer metastatic foci seem to have better overall survival (OS) rates.
- The primary aim of this study was to define prognostic categories for DM in HNSCC.
- Furthermore, the distinction in DM chronology (synchronous versus metachronous DM) in HNSCC was assessed.

Materials and methods

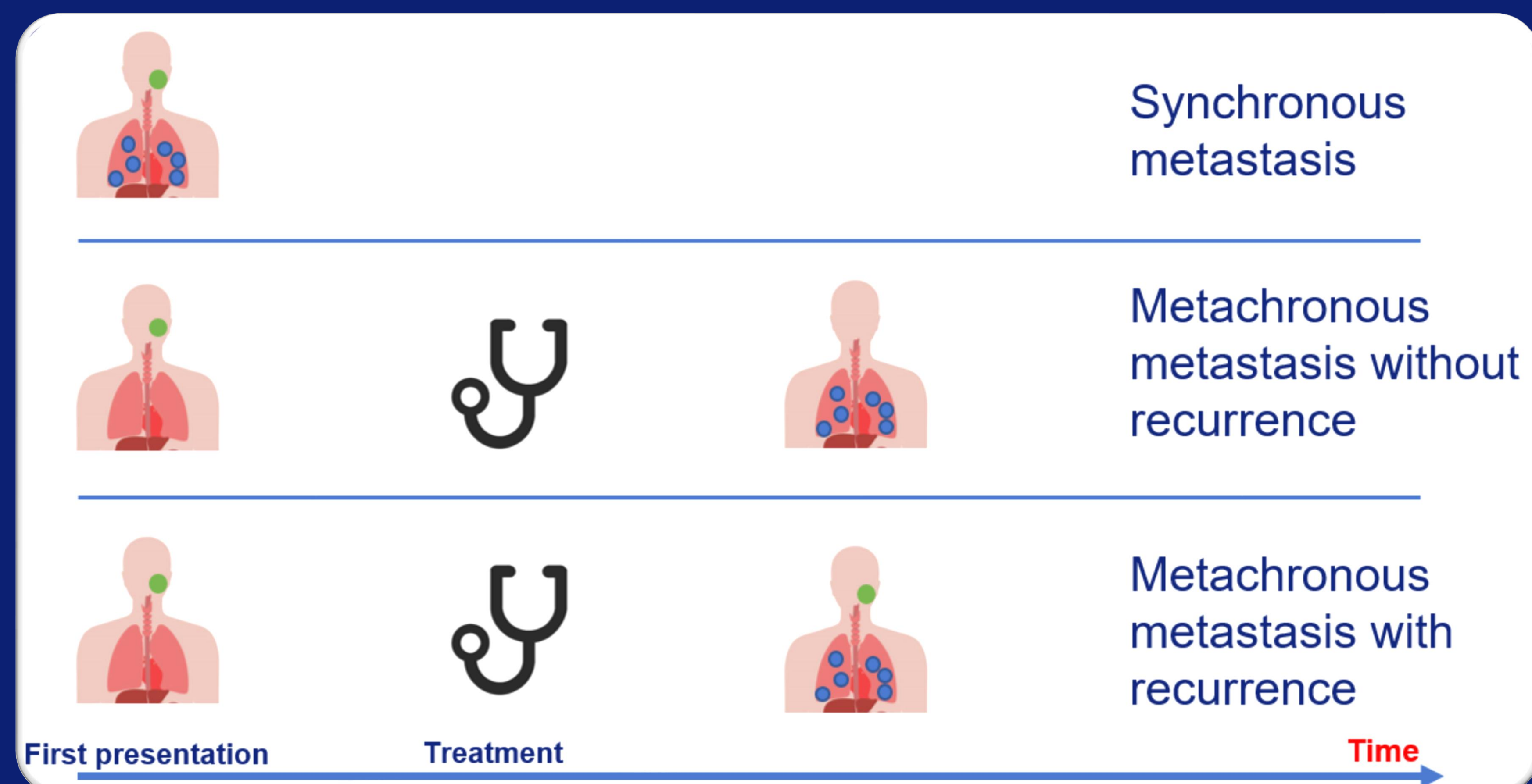
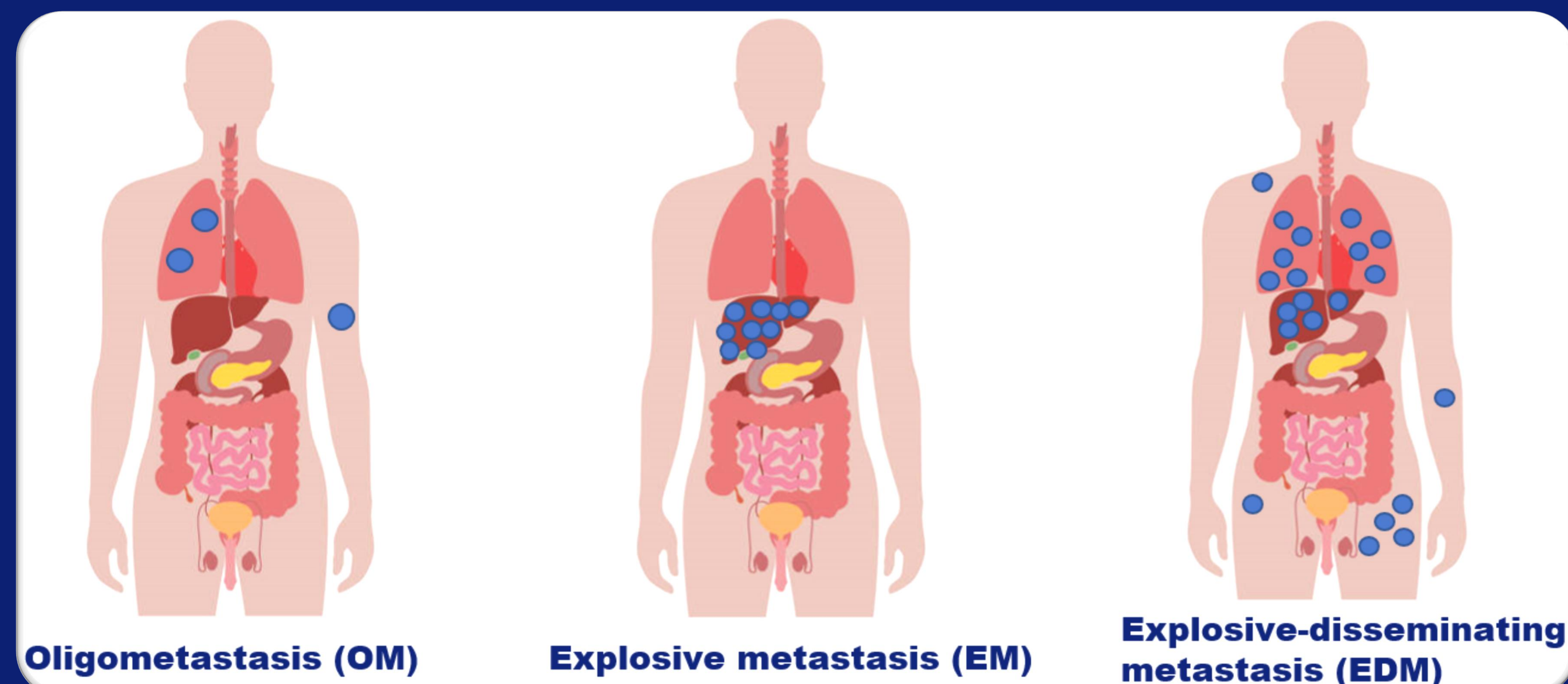
- Retrospective cohort study in the Erasmus Medical Center.
- Categories of DM were defined as oligometastasis (OM) (maximum of 3 metastatic foci in ≤ 2 anatomic sites), explosive metastasis (EM) (≥ 4 metastatic foci at one anatomic site) and explosive-disseminating metastasis (EDM) (spread to ≥ 3 anatomic sites or > 3 metastatic foci in 2 anatomic sites).
- In addition, patients were divided into synchronous versus metachronous DM. Patients diagnosed with a tumor in the head and neck region and DM simultaneously were considered to have synchronous DM. In case of metachronous DM, a further distinction was made in regard to recurrence of the index tumor in the head and neck region.
- The primary endpoint was post-DM disease-specific survival rates (post-DM DSS) in relation to patterns of DM.

Results

- A total of 2687 patients with HNSCC were identified in the period between January 01, 2006 and December 31, 2013.
- The median post-DM DSS of all 324 patients was 3.2 months (IQR 1.3–6.8).
- The majority of the DM spread showed an EDM pattern (44.8%), while OM and EM accounted for 35.5% and 19.8% respectively.
- The median post-DM DSS of the EDM group was 1.7 months (IQR 0.9–4.4), whereas the OM and EM had more optimistic rates of 4.7 months (IQR 2.8–10.3) and 4.1 months (IQR 1.5–7.5) respectively ($p < .001$).
- Multivariable Cox regression analysis was performed to assess how the variables performed simultaneously. All variables, except age and gender, remained statistically significant in the multivariable Cox model, see Table. Pattern of DM and chronology of DM remained to have an impact on post-DM DSS.

Conclusion and Discussion

- Oligometastasis in HNSCC signifies a better prognosis than a polymetastatic pattern. Metachronous DM occurrence with recurrence of the primary index tumor is associated with an unfavorable prognosis.
- A middle group of metastatic pattern has been identified in which multiple metastatic lesions are confined to one anatomic site, showing relatively comparable survival rates to the oligometastatic group.
- Our study paves the way for a more individualized prognostic prediction in patients with DM.



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