



# READ IT BEFORE YOUR PATIENTS

## Head and Neck

### **ARTSCAN III: A Randomised Phase III Study Comparing Chemoradiotherapy With Cisplatin Versus Cetuximab in Patients With Locoregionally Advanced Head and Neck Squamous Cell Cancer.**

*Gebre-Medhin M, Brun E, Engström P, Haugen Cange H, Hammarstedt-Nordenvall L, Reizenstein J, Nyman J, Abel E, Friesland S, Sjödin H, Carlsson H, Söderkvist K, Thomasson M, Zackrisson B, Nilsson P.*

*J Clin Oncol. 2020 Oct 14;JCO2002072. doi: 10.1200/JCO.20.02072.*

#### **PURPOSE**

We performed an open-label randomised controlled phase III study comparing treatment outcome and toxicity between radiotherapy (RT) with concomitant cisplatin versus concomitant cetuximab in patients with locoregionally advanced head and neck squamous cell carcinoma (HNSCC; stage III-IV according to the Union for International Cancer Control TNM classification, 7th edition).

#### **MATERIALS AND METHODS**

Eligible patients were randomly assigned 1:1 to receive either intravenous cetuximab 400 mg/m<sup>2</sup> one week before start of RT followed by 250 mg/m<sup>2</sup>/wk, or weekly intravenous cisplatin 40 mg/m<sup>2</sup>, during RT. RT was conventionally fractionated. Patients with T3-T4 tumours underwent a second random assignment 1:1 between standard RT dose 68.0 Gy to the primary tumour or dose escalation to 73.1 Gy. Primary end point was overall survival (OS) evaluated using adjusted Cox regression analysis. Secondary end points were locoregional control, local control with dose-escalated RT, pattern of failure, and adverse effects.

#### **RESULTS**

Study inclusion was prematurely closed after an unplanned interim analysis when 298 patients had been randomly assigned. At three years, OS was 88% (95% CI, 83% to 94%) and 78% (95% CI, 71% to 85%) in the cisplatin and cetuximab groups, respectively (adjusted hazard ratio, 1.63; 95% CI, 0.93 to 2.86; P = .086). The cumulative incidence of locoregional failures at three years was 23% (95% CI, 16% to 31%) compared with 9% (95% CI, 4% to 14%) in the cetuximab versus the cisplatin group (Gray's test P = .0036). The cumulative incidence of distant failures did not differ between the treatment groups. Dose escalation in T3-T4 tumours did not increase local control.

#### **CONCLUSION**

Cetuximab is inferior to cisplatin regarding locoregional control for concomitant treatment with RT in patients with locoregionally advanced HNSCC. Additional studies are needed to identify possible subgroups that still may benefit from concomitant cetuximab treatment.