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## Plenary Lecture

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### **New radiotherapy fractionation schemes in head and neck cancers. The EORTC trials: A benchmark**

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From 1980 to 1995, 867 head & neck patients (pts) were accrued in 2 randomised phase III trials of hyper (HF) or accelerated (AF) versus conventional fractionation (CF). Both led to positive conclusions in favour of the HF & AF arms.

*EORTC trial 22791* (356 pts, 1980–87) compared CF (70 Gy/35–40 fr/7–8 wks, using 2 fr × 1.15 Gy/day). Locoregional control (LRC) was higher ( $p = 0.01$ ) in HF versus CF. At 5 years, 56% of the pts are LRC free with HF versus 38% with CF. Progression free survival was significantly better in the HF arm ( $p = 0.008$ ). There was no difference in late normal tissue damage between the 2 treatment modalities.

*EORTC trial 22851* (511 pts, 1985–1995) compared AF (72 Gy/45 fr/5 wks) to CF (70 Gy/35 fr/7 wks). Acute and late toxicities were increased in the AF arm. The AF arm is significantly better ( $p = 0.017$ ) for locoregional control than the CF arm (a 15% locoregional gain at 5 years) resulting in a specific survival trend over the CF arm ( $p = 0.06$ ). Overall, these 2 trials show evidence of a major locoregional improvement brought by schemes based upon experimental radiobiological concepts. On-going trials and impact on standard practice will be discussed.