THE DUCTH DEEP HYPERThERMIA TRIAL: UPDATED RESULTS IN Cervix CANcer


1 Daniel den Hoed Cancer Center, Erasmus Medical Center Rotterdam
2 Academic Medical Center Amsterdam,
3 HagaZiekenhuis, Den Haag,
4 Medisch Centrum Haaglanden, Den Haag,
5 University Medical Center Sint Radboud, Nijmegen,
6 University Medical Center Utrecht,
7 Medisch Spectrum Twente, Enschede

Background: The local failure rate in patients with locoregionally advanced cervical cancer is 41-72 % following radiotherapy alone (RT). Local control is a prerequisite for cure. The Dutch Hyperthermia Trial showed that combining radiotherapy with hyperthermia (RT+HT) improves local control at 3 years from 41 to 61 %1,2. However, the follow-up in the early report was relatively short with a median of 43 months.

Purpose: To evaluate long-term results of a randomized phase III trial comparing RT with RT+HT after 12 years follow-up

Material and Methods: Eleven radiotherapy institutes participated in the study. One hundred and fourteen patients were randomized (n = 56 RT, n = 58 RT+HT) between 1990 and 1996. Prognostic factors were equally distributed over both groups. RT was given in 23-28 daily fractions of 1.8-2 Gy and brachytherapy (2 HDR applications of 17 Gy or 20-30 Gy LDR). HT was given 5-6 times, once weekly. The primary endpoint was local control; secondary endpoints were overall survival and toxicity.

Results: At 12 years follow-up, local control remains better in the RT+HT group (36% vs 56%, p = 0.02). The advantage of combined RT+HT was also reflected in a persistently better overall survival after 12 years from 20% (RT) to 37% (RT+HT). In an univariate Cox regression analysis, FIGO stage and WHO performance status (WHO-PS) were significant prognostic factors both for local control and survival. The benefit of HT remained significant after correction for these factors. In patients with continuing pelvic control, 30 % developed distant metastasis in the RT-group compared to 25 % in the RT+HT group (p = 0.4). The incidence of EORTC grade 3-5 radiation-induced toxicity was comparable in both groups.

Conclusions: Adding hyperthermia to radiotherapy in inoperable cervical cancer results in long-term major improvement of local control and survival, without an increase in toxicity.

References: