



Randomized clinical trials overview

Hyperthermia (HT) combined with Radiation Therapy (RT) and/or Chemotherapy (CT) enhances the Complete Response by a factor of 1.4 to 4.6

Several randomized clinical trials on the use of hyperthermia as an adjuvant therapy to radiotherapy and/or chemotherapy or in triple modality have shown significant improvement in outcomes. They are listed in the table. Below samples are representative of responses per type of cancer in humans.

Referencies	Tumour type	Treatment modality	Patients (lesions)	Endpoint	Effect with HT	Effect without HT
Valdagni et al., 1993	Lymphnodes of head & neck tumours	RT+/-HT	41 (44)	CR 5-yr local control 5-yr survival	83% 69% 53%	41% 24% 0%
Overgaard et al., 1995	Melanoma	RT+/-HT	70 (138)	CR rate 2-yr local control	62% 46%	35% 28%

Vernon et al., 1996	Breast	RT+/-HT	306	CR	59%	41%
EL Jones et al., 2005	Breast	RT+/-HT	108	CR Local control	66% 48%	42% 25%
Sneed et al., 1998	Glioblastoma multiforme	RT+/-HT postoperative	68	Median survival 2-yr survival	85 weeks 31%	76 weeks 15%
Van der Zee et al.,2000	Bladder, cervix and rectum	RT+/-HT	358	CR 3-yr survival	55% 30%	39% 24%
Van der Zee et al.,2000	Cervix	RT+/-HT	114	CR 3-yr survival	83% 51%	57% 27%
Frankena et al., 2008 (follow up)	Cervix	RT+/-HT	114	Local control Overall survival	56% 37%	37% 20%
Datta et al.,1997	Cervix	RT+/-HT	64	CR	55%	31%
Harima et al., 2001	Cervix	RT+/-HT	40	CR	85%	50%
Berdov et al.,1990	Rectum	RT+/-HT preoperative	115	5-yr survival	36%	7%
Kakehi et al.,1990	Rectum	RT+/-HT	14	Response	100%	20%
You Q-S et al.,1993	Rectum	RT+/-HT preoperative	122	CR	23%	5%
Strotsky et al., 1991	Bladder	RT+/-HT preoperative	102	3-yr survival	94%	67%
Wang et al., 1996	Oesophagus	RT+/-HT	125	3-yr survival	42%	24%
Egawa et al., 1989	Various superficial	RT+/-HT	92	Response	82%	63%
Colombo et al.,1996	Bladder	CT+/-HT preoperative	52	CR	66%	22%
Colombo et al., 2003	Bladder	CT+/-HT postoperative	83	2-yr relapse free survival	82%	38%

Colombo et al., 2010 (Follow up)	Bladder	CT+/-HT postoperative	83	10-yr disease-free survival	53%	15%
Issels et al., 2010	Soft tissue sarcoma	CT+/-HT	341	Response 2-yr local progression free survival 4-yr local progression free survival 2-yr disease free survival 4-yr disease free survival 2-yr overall survival 4-yr overall survival	28,8% 76% 66% 58% 42% 78% 59%	12,7% 61% 55% 44% 35% 72% 57%
Kitamura et al., 1995	Oesophagus	RT+CT+/-HT	66	CR	25%	6%
Sugimachi et al., 1992	Oesophagus	RT+CT+/-HT preoperative	53	Palliation	70%	8%