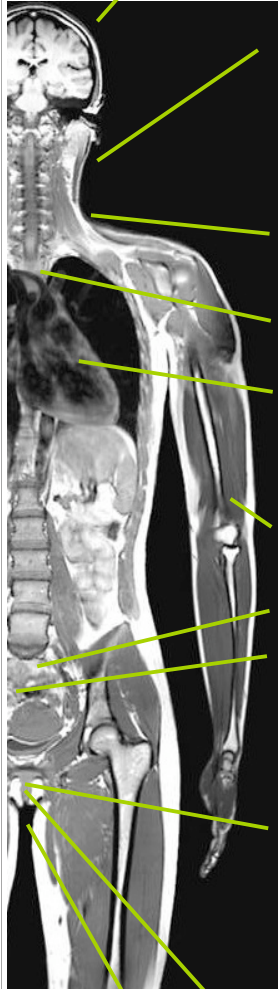


HIPERTERMIA (HT) COMO POTENCIALIZADOR Y SENSIBILIZADOR DE LA RADIOTERAPIA Y QUIMIOTERAPIA



Ref. No.	Parte Corporal	Tipo de Cáncer	Número de Pacientes	RT	QT	Parámetro de Control (endpoint)	Resultados	
							Terapia Convencional	Terapia Convencional + Hipertermia
1	Cerebro	Glioblastoma	16	SI	SI	SUP 2 años	-	18%
2	Cerebro	Tumor cerebral	222	SI	SI	Aumento en supervivencia (%)	-	Difuso: 38%
								Anaplástico: 146%
								Glioblastoma: 57%
3	Cerebro	Astrocitoma WHO Grado III	53	SI	SI	PS 3 años (%)	-	53%
		Glioblastoma WHO Grado IV	126				-	23%
29	Cerebro	Glioblastoma Multiforme	68	SI	NO	SUP 2 años	15%	31%
5	Cabeza y cuello	Carcinoma avanzado de células escamosas	27	SI	NO	OR	-	92%
30	Cabeza y cuello	Tumor en nódulos linfáticos	41	SI	NO	CR	41%	83%
6	Cabeza y cuello	Tumores superficiales con profundidad menor o igual a 3cm	48	SI	SI	CR 3 meses	-	35%
	Pecho						-	68%
	Melanoma						-	30%
7	Esófago	Carcinoma esofágico	51	SI	SI	SUP 5 años	35%	50%
31	Esófago	Cáncer esofágico	125	SI	NO	SUP 3 años	24%	42%
32	Esófago	Cáncer esofágico	66	SI	SI	CR	6%	25%
8	Faringe	Cancer avanzado en faringe	122	SI	NO	SUP 3 años	15%	34%
9	Pecho	Recurrencia superficial	148	SI	NO	OR	41%	61%
10	Pecho	Carcinoma de pecho	306	SI	NO	CR	41%	59%
11	Pecho	Cáncer recurrente inoperable	25	SI	SI	OR	-	80%
12	Pecho	Cáncer de pecho avanzado	49	NO	SI	SUP 4 años	-	75%
13	Melanoma	Melanoma maligno metastásico	70	SI	NO	CR	35%	62%
						CL 2 años	28%	46%
33	Piel	Cáncer superficial	92	SI	NO	OR	63%	82%
14	Estómago	Cáncer gástrico	293	SI	NO	OR	35%	57%
15	Pancreas	Cáncer pancreático inoperable	25	NO	SI	SUP 2 años	-	28%
16	Pancreas	Cáncer pancreático inoperable	?	NO	SI	CR	14%	57%
17	Pancreas	Cáncer pancreático inoperable	46	SI	SI	SUP 2 años	19%	36%
18	Tejido suave	Sarcoma de alto riesgo (STS)	59	NO	SI	SUP 5 años	15-35%	49%
19	Tejido suave	Sarcoma de alto riesgo (STS)	341	NO	SI	DFS 6 meses	74%	88%
20	Cervix	Carcinoma de Cervix Fase IIIB	40	SI	NO	OR	50%	85%
21	Cervix	Sarcoma recurrente en extremidades	114	SI	NO	SUP 12 años	20%	37%
22	Cervix	Cáncer cérvico local avanzado	114	SI	NO	CR	57%	83%
						SUP 3 años	27%	51%
23	Cervix	Cáncer cérvico local avanzado	18	SI	SI	CR	-	66%
34	Cervix	Cáncer de Cervix	64	SI	NO	CR	31%	55%
22	Pelvis	Tumores pélvicos avanzados	358	SI	NO	CR	39%	55%
24	Próstata	Cáncer de Próstata avanzado	96	SI	NO	DFS 3 años	-	91%
25	Vejiga	Carcinoma superficial de vejiga	52	NO	SI	CR	22%	66%
35	Vejiga	Cáncer de vejiga	102	SI	NO	SUP 3 años	67%	94%
26	Recto	Carcinoma rectal	18	SI	SI	Resectabilidad	-	78%
27	Recto	Cáncer rectal avanzado	109	SI	SI	SUP 4 años	-	80%
28	Recto	Cáncer rectal avanzado	105	SI	SI	CR	-	51%
36	Recto	Carcinoma rectal avanzado	115	SI	NO	SUP 5 años	7%	36%
37	Recto	Cáncer rectal avanzado	14	SI	NO	OR	20%	100%



Ref No.	Fuente
1	Assogna M., Castigliani G., De Chicchis M., Gargano L., Coletta D., Pigliucci G.M.: Experience and results with radiofrequency hyperthermia: Approach in Glioblastoma. Department of Clinical Hyperthermia University of Rome, Italy.
2	H. Sahibas, D.H.W. Groenemeyer.: Retrospective clinical study for advanced brain gliomas by hyperthermia treatment, an update. University Witten/Herdecke, Institute for MicroTherapy, Germany.
3	E.D. Hager, H. Sahinbas, D.H. Groenemeyer, F. Migeod.: Prospective phase II trial for recurrent high grade gliomas with low radiofrequency (LRF) Hyperthermia. BioMed Hospital, Bad Bergzabern, German & University Witten-Herdecke, Bochum, Germany.
29	Sneed PK, Stauffer PR, McDermott W, Diederich CJ, Lamborn KR, Prados MD, Chang S, Weaver KA, Spry L, Malec MK, et al. Survival benefit of hyperthermia in a prospective randomized trial of brachytherapy boost hyperthermia for glioblastoma multiforme. Int J Radiat Oncol Biol Phys 1998;40:287-295.
5	Amichetti M, Romano M, Busana L, Bolner A, Fellin G, Pani G, Tomio L, Valdagni R.: Hyperfractionated radiation in combination with local hyperthermia in the treatment of advanced squamous cell carcinoma of the head and neck: a phase I-II study., Radiother Oncol Vol 45, 1997, pp.155-158
30	Valdagni R, Amichetti M, Pani G. Radical radiation alone versus radical radiation plus microwave hyperthermia for N3 (TNM-UICC) neck nodes: A prospective randomized clinical trial. Int J Radiat Oncol Biol Phys 1988;15:13-24.
6	Valdagni R, Amichetti M. Report of long-term follow-up in a randomized trial comparing radiation therapy and radiation therapy plus hyperthermia to metastatic lymph nodes in stage IV head and neck patients. Int J Radiat Oncol Biol Phys 1993;28:163-169.
6	Gabriele P, Baiotti B, Giovannini V, Pacetti P, et al.: Local Hyperthermia and Radiation Therapy in the treatment of recurrent pretreated superficial tumors. Radiotherapy Dep. Inst. of Research and Cure of Cancer / Medical Physics and Radiotherapy Dep. Maurizioano Hospital, Turin, Italy
7	Nozoe T, Kuwano H, Watanabe M, Yasuda M, Sadanaga N, Mimori K, Suimachi K: The long-term results of pre-operative hyperthermia-chemo-radiotherapy for esophageal carcinoma - a comparison with pre-operative radiation therapy alone. Eur J Surg Oncol 1995; 21: 374-378
31	Wang J, Li D, Chen N. Intracavitary microwave hyperthermia combined with external irradiation in the treatment of esophageal cancer. Zhonghua Zhong Liu Za Zhi 1996;18:51-54.
32	Kitamura K, Kuwano H, Watanabe M, Nozoe T, Yasuda M, Dumiyoshi K, Saku M, Sugimacahi K. Prospective randomized study of hyperthermia combined with chemoradiotherapy for esophageal carcinoma. J Surg Oncol 1995;60:55-58.
8	Terentjev Igor, Maslennikova Anna: Thermoradiotherapy and Radiochemotherapy of locally advanced pharinx cancer with involved lymph nodes. Nizhny Novgorod Sate Medical Academy, Nizhny Novgorod, Russian Federation.
9	Sherar M, Liu FF, Pintlilie M, Levin W, Hunt J, Hill R, Hand J, Vernon C, van Rhoon G, van der Zee J, Gonzalez DG, van Dijk J, Whaley J, Machin D.: Relationship between thermal dose and outcome in Gonzalez DG, van Dijk J, Whaley J, Machin D.: Relationship between thermal dose and outcome in J Radiat Oncol Biol Phys 1997 Sep 1;39(2):371-380
10	International Collaborative Hyperthermia Group: Vernon CC, Hand JW, Field SB, Machin D, Whaley JB, Van der Zee J, Van Putten WLJ, Van Rhoon GC, Van Dijk JDP, Gonza 'lez Gonza 'lez D, et al. Radiotherapy with or without hyperthermia in the treatment of superficial localized breast cancer: Results from five randomized controlled trials. Int J Radiat Oncol Biol Phys 1996;35:731-744.
11	Feyerabend T, Wiedemann GJ, Jager B, Vesely H, Mahlmann B, Richter E: Local hyperthermia, radition and chemotherapy in recurrent breast cancer is feasible and effective except for inflammatory disease, Int. J. Rad. Oncol. 2001, 49:1317-1325
12	D.W.Kim, K. Blackwell, Z. Vujaskovic, O. Craciunescu, P. Stauffer, V. Liotcheva, E. Jones: A phase I/II study of neoadjuvant liposomal Doxorubicin, Paclitaxel, and Hyperthermia in locally advanced breast cancer. Duke University Medical Center; Int. J. Radiation Oncology Biol Phys, 72, 1. 2008
13	Overgaard J, Gonzalez Gonzalez D, Hulshof MC, Arcangeli G, Dahl O, Mella O, Bentzen SM.: Int Hyperthermia as an adjuvant to radiation therapy of recurrent or metastatic malignant melanoma. A multicentre randomized trial by the European Society for Hyperthermic Oncology., J Hyperthermia 1996 Jan;12(1):3-20
33	Egawa S, Tsukiyama I, Watanabe S, Ohno Y, Morita K, Tominaga S, Onoyama Y, Hashimoto S, Yanagawa S, Uehara S, et al. A randomized clinical trial of hyperthermia and radiation versus radiation alone for superficially located cancers. J Jpn Soc Ther Radiol Oncol 1989;1:135-140.
14	Shchepotin IB, Evans SR, Chorny V, Osinsky S, Buras RR, Maligonov P, Shabanchov N, Nauta RJ.: Intensive preoperative radiotherapy with local hyperthermia for the treatment of gastric carcinoma., Surg Oncol 1994 Feb;3(1):37-44
15	Assogna M. Castigliani G. De Chicchis M., Gargano L. Et al: The importance of the recent results of the capacitive hyperthermia (HT) associate with chemotherapy in treating inoperable pancreatic tumors: an update. Department of Clinical Hyperthermia. University of Rome.
16	Takagi T, Kokura S, Ishikawa T, Inui T, Izozaki Y, et al: The effect of the combination therapy of Hyperthermia and Gemcitabine for the treatment of advanced inoperable pancreatic cancer. Kyoto Prefectural University of Medicine, Japan.
17	Maluta S., Pioli F., Dall' Oglio S., Romando M. Impact of hyperthermia combined with radiochemotherapy in locally advanced pancreatic cancer. Dept of Radiotherapy of Verone, Italy.
18	Issels RD, Abdel-Rahman S, Salat C, Falk MH, Ochmann O, Wilmanns W: Neoadjuvant chemotherapy combined with regional hyperthermia (RHT) followed by surgery and radiation in primary recurrent highrisk soft tissue sarcomas (HR STS) of adults (updated report), J. Cancer Res. Clin. Oncol. 1998, 124:R105
19	Issels R, Lindner L, Mella O, Kuhlencordt M, Hohenberger P, Abdel-Rahman S, et al.: Risk of early progression in patients with high-risk tissue sarcomas: Results of the Phase III randomized prospective trial of neoadjuvant chemotherapy with or without regional Hyperthermia (EORTC - ESHO Intergration Trial)
20	Nagata K, Harima K et al. A randomized clinical trial of radiation therapy versus thermoradiotherapy in stage IIIB cervical carcinoma. Int J Hyperthermia 2001;17:97-105
21	Franckena M, Stalpers L.J.A., Koper P.C.M. Wiggeraad R.G.J. Hoogenraad W.J. Van der Zee J., et.al. Long term improvement in treatment outcome after radiotherapy and hyperthermia in locoregionally advanced cervix cancer: an update of the Dutch Deep Hyperthermia Trial. Int. J. Radiation Oncology Biol. Phys. 70, 4, 1176 - 1182. 2008.
22	Van der Zee J, González González D, van Rhoon G, Van Dijk J, et al. Comparison of radiotherapy alone with radiotherapy plus hyperthermia in locally advanced pelvic tumors: a prospective, randomised, multicentre trial. The Dutch Deep Hyperthermia Group.
23	Gabbani M., Giudici S., Dall' Oglio S., Romano M., Franchi M., Maluta S.: Clinical impact of adding hyperthermia in patients affected by locally advanced cervical cancer treated with chemo-radiotherapy: the experience of Verona Multidisciplinary Group. University of Verona.
34	Datta NR, Bose AK, Kapoor HK. Thermoradiotherapy in the management of carcinoma cervix (stage IIIB): A controlled clinical study. Indian Med Gazette 1987;121:68-71.
22	Van der Zee J, González González D, van Rhoon G, Van Dijk J, et al. Comparison of radiotherapy alone with radiotherapy plus hyperthermia in locally advanced pelvic tumors: a prospective, randomised, multicentre trial. The Dutch Deep Hyperthermia Group.
24	Porcaro A.B., Romano M, Sava T, Chierago G, Maluta S., Comunale L: Sequential regional hyperthermia (RH) and conformal Radiotherapy (RT) in treating patients with locally advanced prostate cancer: preliminary results in 96 patients
25	Colombo R, de Pozzo LF, Gev A: Neoadjuvant combined microwave induced local hyperthermia and topical chemotherapy versus chemotherapy alone for superficial bladder cancer, J. Urol. 1996, 155:1227-1232
35	Strotsky AV, Fradkin SZ, Zhavrid EA, Karpovich UA. Combined therapy of bladder cancer with the use of hyperthermia. Strahlenther Onkol 1991;167:346.
26	Rau B, Wust F, Hohenberger P, Löffel J, Hüberbein M, Below C, Gellermann J, Speidel A, Vogl T, Ries H, Felix R, Schlag PM: Preoperative hyperthermia combined with radiochemotherapy in locally advanced rectal cancer: A phase II clinical trial, Ann. Surg. 1998, 227:380-389
27	M. Romano, S. Maluta, C. Cordiano, G.G. Delani, et al: Pre-operative radio-chemotherapy plus regional hyperthermia in the treatment of advanced rectal cancer: experience with radiation dose escalation
28	Pioli F, Maluta S., Romano M., Nadalini L., et al.: Outcomes and quality of life in patients affected by advanced rectal cancer treated with neoadjuvant radio-chemotherapy combined with hyperthermia. Radiotherapy Dept. of Verone Italy / Psycho-oncology Unit of Verone, Italy / Mario Negri Institute of Milan, Italy / Urology of Parma, Italy
36	Berdow BA, Menteshashvili., Thermoradiotherapy of patient with locally advanced carcinoma of the rectum. Int J Hyperthermia 1990;6:881-890.
37	Takehi M, Ueda K, Mukojima T, Hiraoka M, Seto O, Akanuma A, Nakatsugawa S. Multi-institutional clinical studies on hyperthermia combined with radiotherapy or chemotherapy in advanced cancer of deep-seated organs. Int J Hyperthermia 1990;6:719-740.