

**P-24: Vakalis Ioannis, Kouridakis Petros, Daniilidis Lazaros, Natsouki Valentina, Kalyvas Spyros, Maragkos Michail, Dimitriadis Konstantinos (2012) Loco regional hyperthermia in Greece: A new treatment modality for treating deep seated tumors. Two years clinical experience from Thessaloniki hyperthermia's – Oncology operation center – New challenges**

**"LOCO REGIONAL HYPERTHERMIA IN GREECE: A NEW TREATMENT MODALITY FOR TREATING DEEP SEATED TUMORS. TWO YEARS CLINICAL EXPERIENCE FROM THESSALONIKI HYPERTHERMIA'S - ONCOLOGY OPERATION CENTER-NEW CHALLENGES"**

ONCOHYPERTHERMIA OPERATION CENTER  
TSIMISKI 82,THESSALONIKI HELLAS

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We treated 75 patients with cancer between August 2010 and September 2012.We used the "OncoTherm 2000plus system (13.56 Mhz) medical device in our hyperthermia operation center.

**REPORTING RESULTS**

**1.CENTRAL NERVOUS SYSTEM TUMORS**

-3 Men with gliomas and 1 man with astrocytoma.We noticed general improvement as regarding to their performance status and reduction of their tumor mass in routine radiologic tests.

**2.HEAD AND NECK-ORAL CAVITY**

-1 Man suffering of tongue cancer who received 12 trials of local deep-heat (HT) treatment having received chemo-radiotherapy before. This man developed progressive disease with lung metastases in the end of the treatment.

-1 Man with epithelial (squamous cell)SCC carcinoma who has been treated with HT together with Radiotherapy. His tumor has been reduced during therapy on the order of 90%.One year later this patient died having stopped any other therapy.

**3.LUNG CANCER**

-9 cases,3 Women-6 Men

-1 Woman having tumor at the right lower lobe. After 24 trials her tumor almost completely disappeared (no evidence of primary tumor).

-1 Woman having cancer at the left lower lobe after surgery and chemotherapy with x-knife. Her tumor has been reduced on the order of 40%.

-1 Woman having cancer at the right upper lobe. Her cancer has been partially responded to treatment and she is programmed to be operated.

-1 Man having medically inoperable pulmonary disease remained with no response to treatment

-1 Man having medically inoperable pulmonary disease paused treatment after his 3<sup>rd</sup> trial.

**4.BREAST CANCER**

-16 women having breast cancer,4 with early stage (stages I-III) and 14 with locally advanced and/or tumor recurrent disease (stage IV).

-Women from the first group received 12 trials HT and 3 of them are currently under careful medical supervision. The last one having cancer in both of her breast paused treatment during her 3<sup>rd</sup> trial.

-Amongst the women from the second group :

-1 of them having receiving 12 trials HT together with chemotherapy her tumor completely responded to treatment and demonstrates no evidence of primary tumor according to her MRI test.

-7 of them with liver metastases demonstrated stabilized response according to their radiologic exams.

-1 of them with liver metastases having receiving chemotherapy sessions (she finally developed tumor necrosis syndrome and died.

-2 of them having pulmonary metastases, the one with no response to treatment and the other with minor reduction to her tumor size according to their x-ray tests.

**5.STOMACH CANCER**

-1 Man having stomach cancer after surgery having one meta lesion in his liver. After 12 trials performed partial response of his metastasis.

-1 Woman having medically inoperable stomach cancer 88 years old paused treatment after 1<sup>st</sup> session.

**6.GIST**

-1 Woman having GIST cancer 77 years old. After 12 trials she did not responded to treatment and she died 3 months later of anorexia nervosa.

**7.LIVER CANCER**

-1 Man having liver cancer and hepatitis-C having two main tumor lesion in his liver, one 12cm and the other 1cm over his left adrenal gland. He has had liver chemoembolization with about 60 trials. His first tumor lesion shrank on the order of 50-60% while the other did not responded to treatment at all.

**8.GALLBLADDER CANCER**

-2 Men and 1 woman having cholangiocarcinoma.Amongst then 1 man and 1 woman having liver meta-lesions have been undergone cholecystectomy and adjuvant systematic chemotherapy (12 trials) did not responded well to therapy.

-1 Man having medically inoperable cholangiocarcinoma died after the 4<sup>th</sup> trial.

**9.PANCREATIC CANCER**

-Among 10 medically inoperable patients having pancreatic cancer,7 men and 3 women.

-2 of the men received over 30 trials HT together with adjuvant chemotherapy and they demonstrated partial response to therapy and they live up to now (2 years later) with good quality of life.

-1 Man died after 12 trials HT

-1 Man having metastases lesions in his liver and in the lungs from the beginning, died of intrabronchial hemorrhage.

-3 Men paused HT after 4-5 trials.

-1 Woman suffering of medically inoperable pancreatic cancer after 36 trials of adjuvant chemotherapy together with HT trials demonstrated a good performance status.Her quality of life improved and 1.5 year later she died of acute renal failure.

-1 Woman suffering of inoperable pancreatic cancer paused therapy after 7 trials HT.

-1 Woman having medically inoperable pancreatic cancer with 27 trials HT and adjuvant chemotherapy despite the fact that her meta lesions in her liver and her tumor markers have been increased, performs up to now (about 13 months) an excellent quality of life.

**10.COLON CANCER**

Among 8 instances with colon cancer,5 men and 3 women developed meta lesions in their liver.

-1 Man with a single liver metastasis after ablation and 12 trials HT this metastatic lesion completely disappeared.

-1 Man received 12 trials.(We have no more data)

-3 Men paused trials in the middle of their treatment.

-1 Woman with meta lesion in the liver and in the lungs having received 12 double trials,she demonstrated improvement in her lung tumors according to her radiological exams during her follow-up.

-1 Woman with multi meta lesions in liver,ovaries,uterus paused treatment during the 3<sup>rd</sup> trial suffering of acute peritonitis and acute abdomen.

-1 Woman suffering of tumor relapses in her abdomen paused treatment during 4<sup>th</sup> trial.

**11.RENAL TUMORS-GRAWITZ**

-1 Man with right Grawitz tumor 79 years old, with meta lesions in his lungs had 3 double trials. He paused treatment and some time later he died of acute respiratory inadequacy.

**12.OVARIAN CANCER**

-14 patients with ovarian cancer.

-Amongst them:

-13 received adjuvant chemotherapy.

-3 having undergone some trials HT, paused treatment.

-4 having liver metastases, demonstrated improvement in quality of life after 12 trials.

-3 having multiple metastases demonstrated progressive disease after 12 trials.

-1 Woman with tumor recurrence after 24 trials these died of allergic reaction to chemotherapy.

-1 Woman developed ascites after 24 trials and died of peritonitis and acute abdomen.

-1 Woman received 24 trials without chemotherapy performed complete remission to meta lesions.

-1 Woman stage IV after total hysterectomy with liver meta lesions,ascites and chemoprophylaxis with tamoxifen having received 239 trials HT.After therapy performed shrinkage of tumor lesions and a reduction to tumor markers levels showing evidences of a low density lesion with central necrosis in her previous tumor lesion according to her radiological findings .

**13.ANUS CANCER**

-1 Man and 2 women with anus cancer.

-1 Man with remission around the tumor bed after surgery having a meta lesion in the left upper lobe. He received 12 trials of HT with adjuvant chemo-radiotherapy. He demonstrated partial remission to therapy according to radiological images. He finally died of brain attack.

-1 Woman with anus cancer who did not want to be operated. She received chemotherapy and during her second trial she died of undiagnosed meta lesion in the brain.

-1 Woman paused after 1<sup>st</sup> trial.

**14.SARCOMA**

-2 women with sarcoma both paused treatment during trials the first one during 4<sup>th</sup> and the second during 8<sup>th</sup> trial.

**CONCLUSIONS:**

- 1.Hyperthermia combined with chemotherapy and/or Radiotherapy demonstrates significant clinical response rates as compared to chemotherapy and/or Radiotherapy alone in some cases.
- 2.Hyperthermia is quite well tolerated and does not significantly increases the toxicity of Radiation or combined modality therapy.
- 3.In contrast, estimation of the severity of late effects is often haphazard and incomplete depending on the sensitivity of the test used for detection. Over time treatment change frequently, making it difficult to evaluate the role of each component to the outcome. Indications show that life expectancy from the statistical point of view with the addition of hyperthermia may be improved. Hence:
- 3.More protocols is needed to be currently designed based on clinical experience randomizing chemo radiation therapy alone versus hyperthermia together with chemo/radiotherapy so that the role of hyperthermia in the neoadjuvant treatment of cancer may be better defined.