# Oncothermia and the paradigm shift in integrative oncology

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# Oncothermia and the paradigm shift in integrative oncology

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**Abstract**

We are all aware of the Phase III trials with chemotherapy and Hyperthermia vs chemotherapy alone and radiation therapy with Hyperthermia vs radiation therapy alone. All the trials indicated statistically significant differences (almost doubling of the response rates) in favor of the combination arm. The difference with Conventional vs Integrative approach to cancer treatment is similar to the differences of Conventional Hyperthermia and Oncothermia. What do we expect to see when we combine Integrative Oncology with Oncothermia? This is an analysis of the results of an Integrative Oncology Center, using an Oncothermia flagship in conjunction with a quantitative molecular/genetic analysis of the patients' cancer cells. Integrative Oncology is forcing a paradigm shift in the treatment of cancer. When Oncothermia is included in the therapeutic strategy as a flagship for the integrative therapeutic strategy, the shift is intense. Patients are demanding more from their Oncologists beyond the Triad of Surgery, Radiation therapy and Chemotherapy. This is true for the other fields of Medicine as well, and this led to the creation of CAHCIM (Consortium of Academic Health Centers for Integrative Medicine). The demand of not only patients, but Medical Students as well, led to the formation of this Organization which has enlisted High profile institutions such as Harvard Univ., Dukes Univ., Mayo Clinic, Stanford University and many more. The establishment of CTCA (Cancer Treatment Centers of America) all across the USA, is proof of this Paradigm Shift). The combination of modulated electro Hyperthermia (Oncothermia) with a targeted approach to cancer cell kill based on molecular/genetic sensitivities, as well as targeting the cancer cell microenvironment by oxygen perfusion of the tissues (autologous ozonated blood transfusion) and tissue alkalynization (IV bicarbonate infusion) in conjunction with high doses of IV vitamin C has led to unprecedented increase of response rates and TTP. Herein we analyze these findings and propose multicentric randomized trials in centers that use mEHT.

# 36th ICHS CONGRESS
# BUDAPEST
# September 28-29 2018

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ΕΛ.ΕΤ.ΕΞ.Ο

Dr. Alfred J. Barich
President Hellenic Society for Integrative Oncology
Chairman of Scientific Advisory Board for Hellenic Society for Hyperthermic Oncology

# ONCOTHERMIA AND THE PARADIGM SHIFT IN INTEGRATIVE ONCOLOGY

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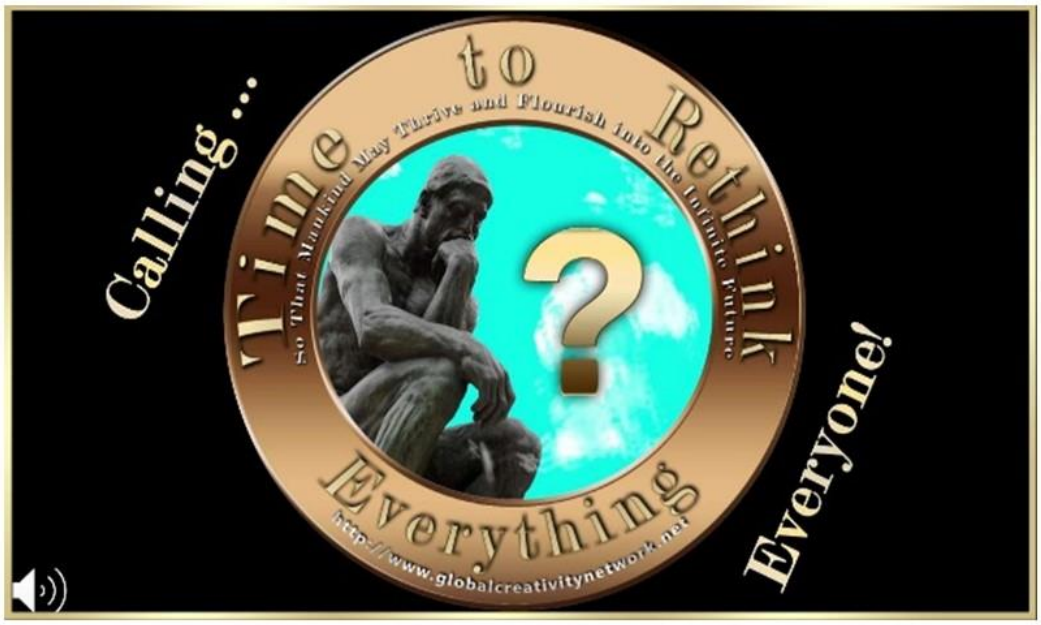
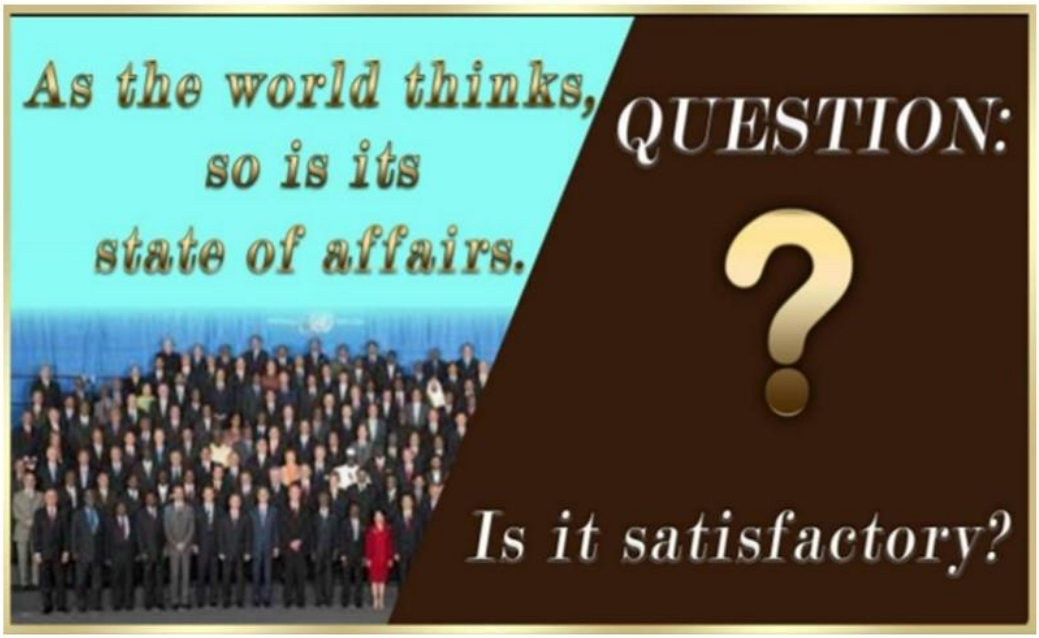
# CONFLICT OF INTEREST

THE AUTHORS HAVE CONFLICT OF INTEREST WITH THE PREVAILING MENTALITY OF CANCER TREATMENT

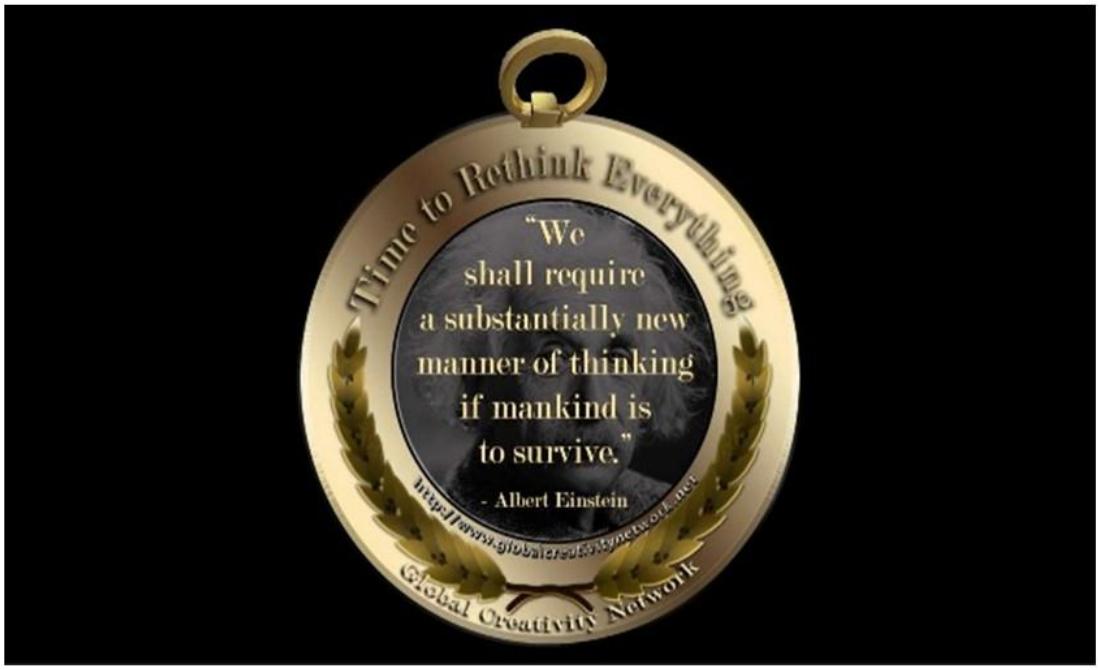

A NEW START WITH A NEW PHILOSOPHY AND A NEW PARADIGM WILL PREVAIL



PROGRESS COMES FROM THINKING OUT OF THE BOX



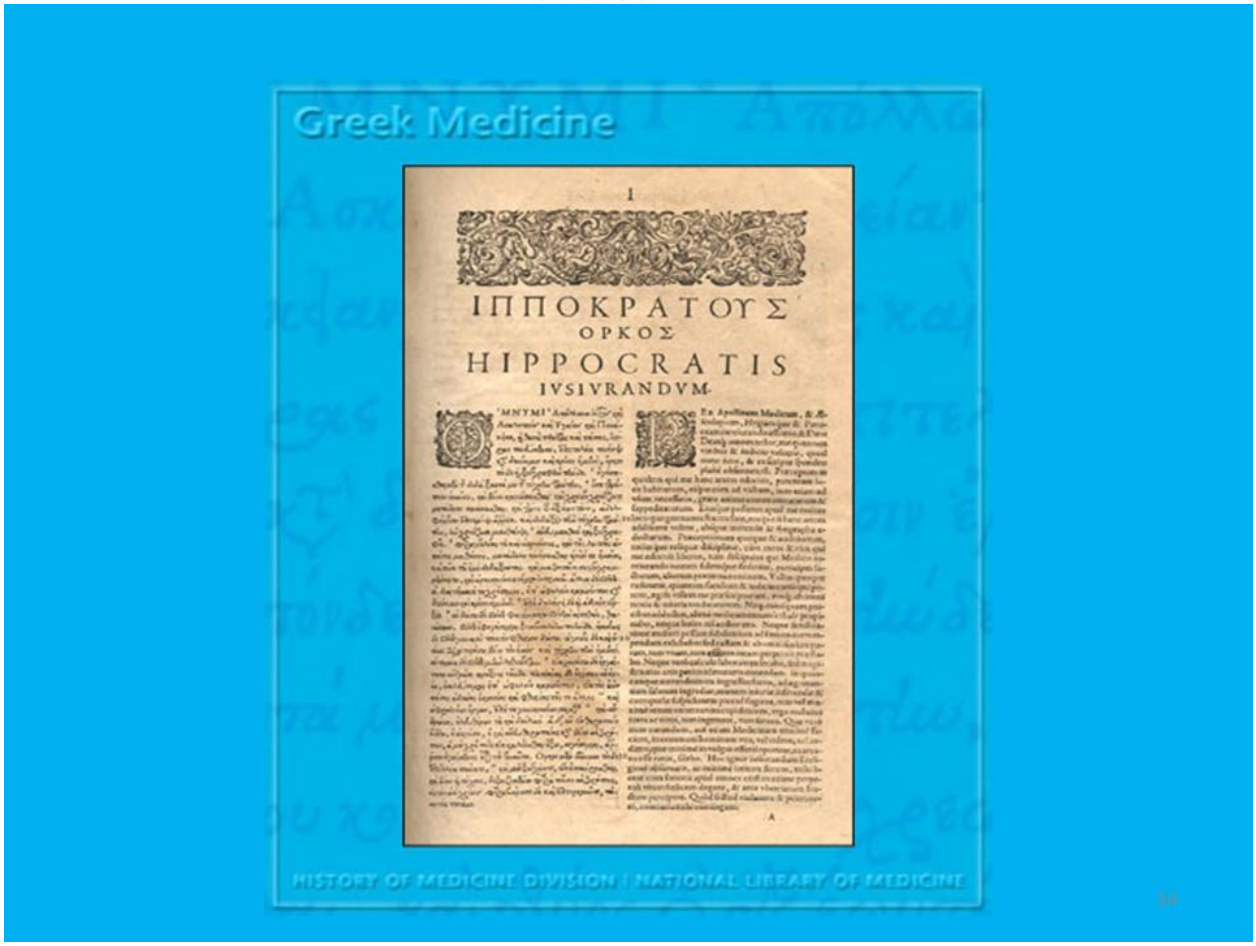

CURRENT MEDICINE FAVORS PROTOCOOLS AND NOT PATIENTS



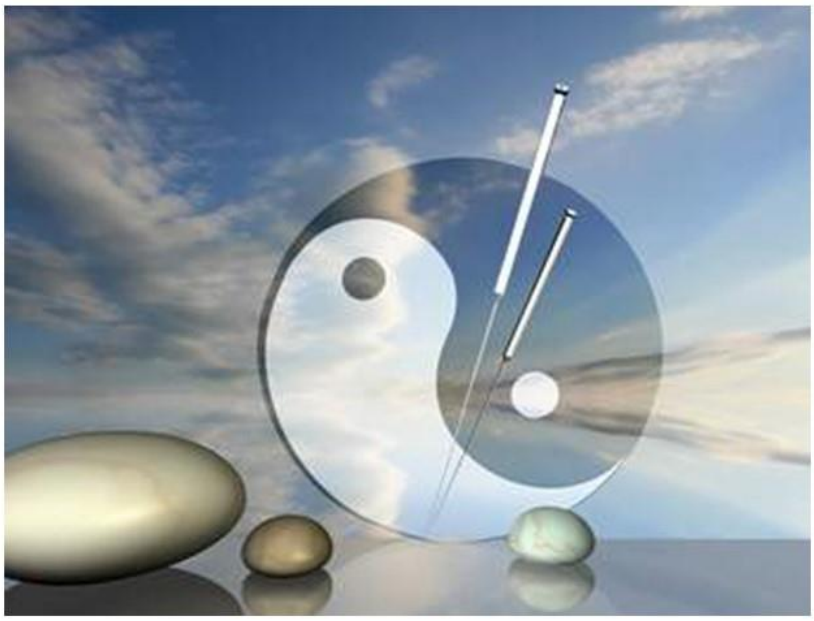
# THINKING GLOBALLY AND ACTING LOCALLY

# WE MUST LEARN FROM OUR MISTAKES

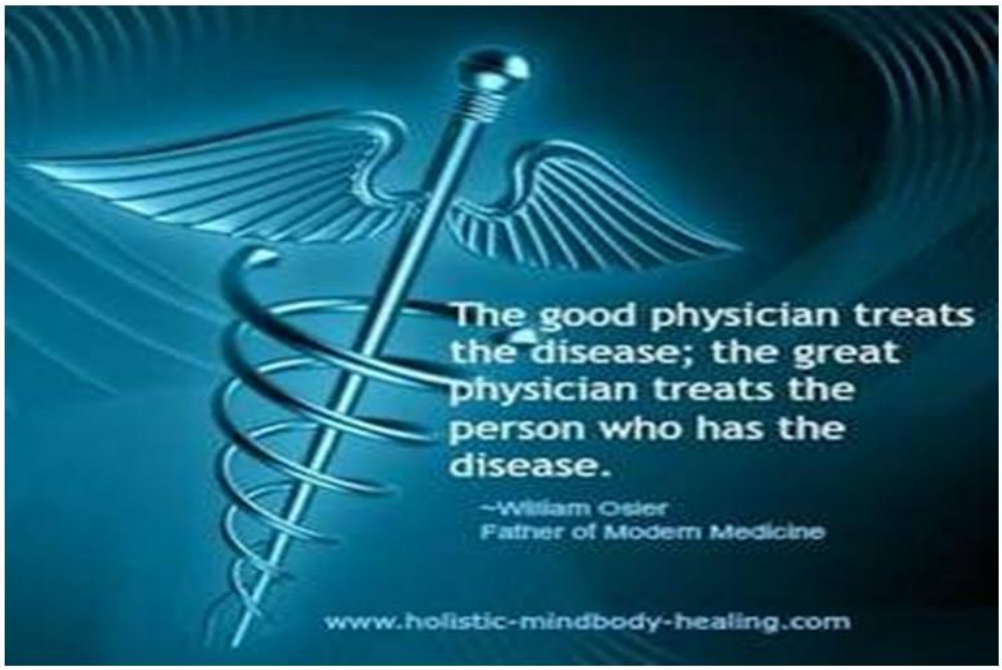
# MEDICINE MUST BE INCLUSIVE AND NOT EXCLUSIVE

WE MUST COMPLEMENT NATURE AND NOT FIGHT IT



THE PATIENT MUST BE AT THE CENTER OF OUR FOCUS



# A TOAST TO HEALTH

## BOWL OF HYGEIA

The bowl with a snake coiled around it is called the bowl of Hygeia with the serpent of Epidaurus, and is a variant on the above. Hygeia was Aesculapius's daughter and a Greek Goddess of health. Her symbol was a serpent drinking from a bowl. The vessel is usually depicted with a long stem and a shallow, wide bowl as seen here. It also is considered suitable for pharmacy. The bowl of Hygeia with serpent of Epidaurus shown here is the symbol for Hungarian pharmacists.

## Integrative Medicine

Integrative medicine combines biomedical care with appropriate complementary therapies, to heal and preserve the health of the patient's body, mind, and spirit.

It emphasizes the individual's capacity for self-healing and offers an approach to care that is personalized, collaborative, and comprehensive. This approach is interdisciplinary and utilizes the skills of other health care disciplines and professionals through referral and consultation.

***Consortium of Academic Health Centers for Integrative Medicine***

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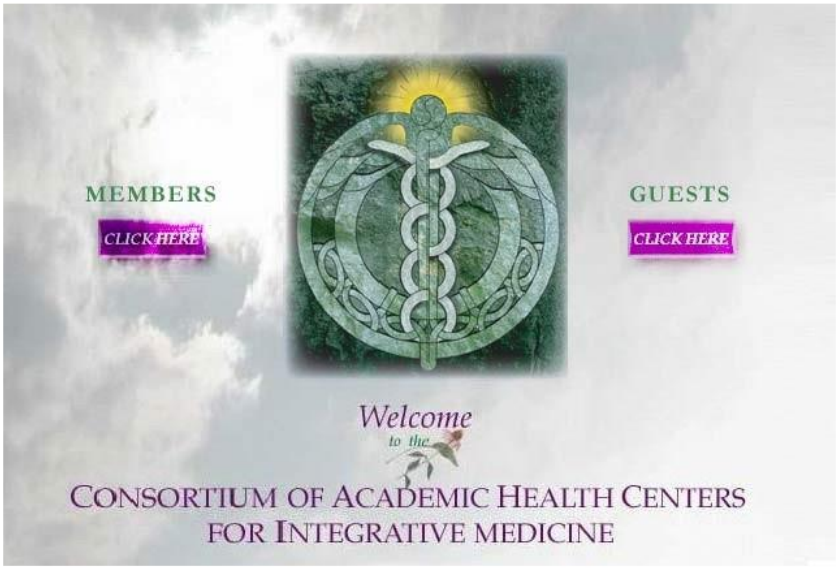


# CAHCIM Members

- Albert Einstein/Beth Israel
- **Columbia University**
- Duke University
- George Washington
- Georgetown
- **Harvard**
- Laval University
- **Mayo Clinic**
- OHSU
- **Stanford University**
- **Yale University**
- Wake Forest University
- University of Alberta
- University of CA/Irvine
- Thomas Jefferson
- UMDNJ
- University of Arizona
- University of Calgary
- University of Hawaii
- University of Washington
- **University of California/LA**
- University of California/SF
- University of Colorado
- University of Connecticut
- University of Kansas
- University of Maryland
- University of Massachusetts
- University of New Jersey
- University of New Mexico
- University of North Carolina-Chapel Hill
- University of Michigan
- University of Minnesota
- University of Pennsylvania
- University of Pittsburgh
- University of Texas-Galveston
- University of Vermont
- **University of Wisconsin**

Zentrum für molekulare Onkologie

# INTEGRATIVE ONCOLOGY

.. Because humans are different!

## The Phases of Integrative Oncology

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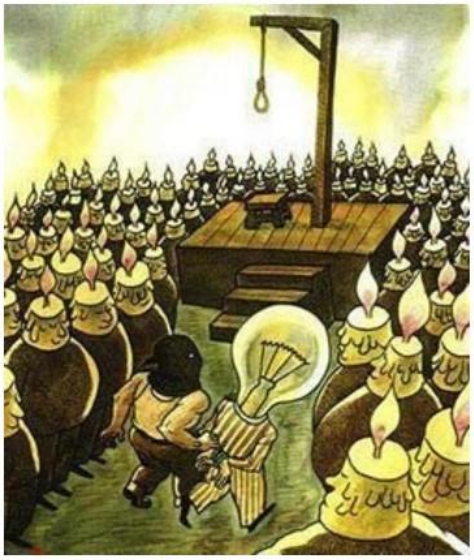
**THE STRUGGLE TO INTRODUCE NEW IDEAS AND APPROACHES IS OFTEN UNEVEN**

TRYING TO INTRODUCE NEW IDEAS IS OFTEN MET WITH HOSTILITY



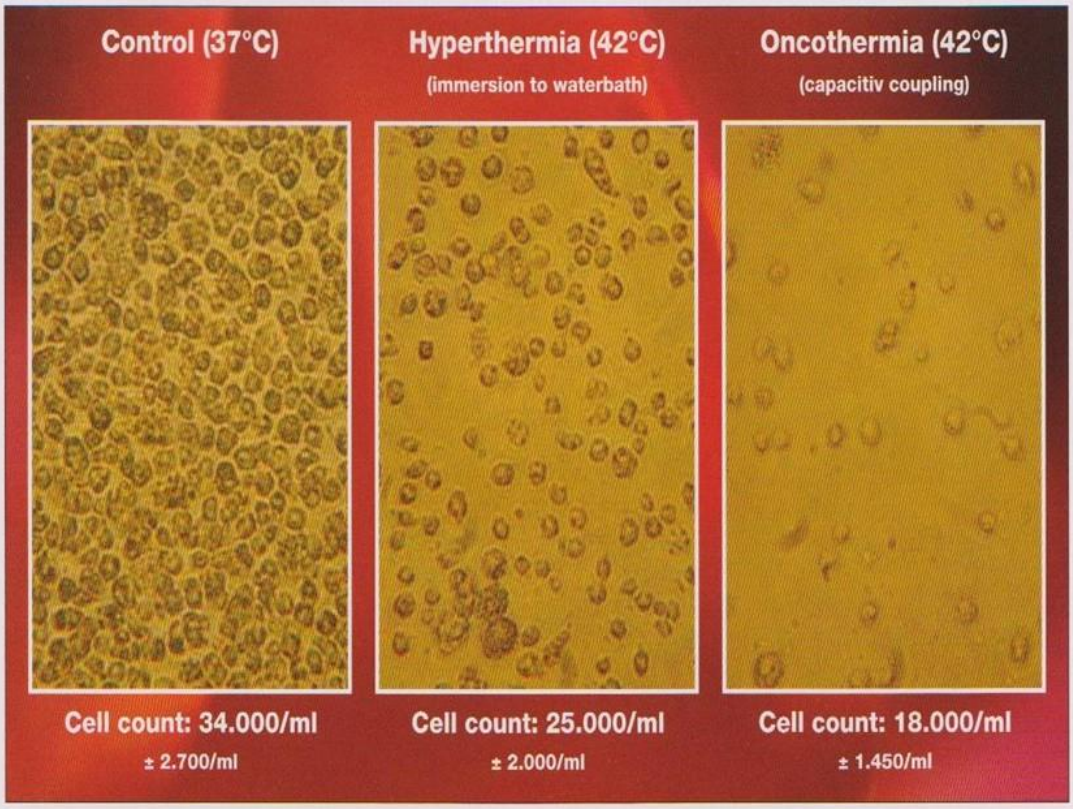
YOU CAN FIGHT PROGRESS AND CHANGE …BUT YOU CAN'T STOP THEM !!
TODAY, BASTIONS OF CONSERVATIVISM ARE SLOWLY INCLUDING DEPARTMENTS OF INTEGRATIVE ONCOLOGY IN THEIR HOSPITALS…
THE PARAGIGM SHIFT HAS BEGUN

## COMPLEMENTARY AND ALTERNATIVE MEDICINE… LEADING TO INTEGRATIVE ONCOLOGY

- "Complementary and Alternative Medicine is a Group of Diverse Medical and Health Care Systems, Practices, and Products That are Not Presently Considered Part of Conventional Medicine"

National Center for Complementary and Alternative Medicine

# ONCOTHERMIA – A STRATEGICAL ADDITION TO THE ARSENAL AGAINST CANCER



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# Individual Cancer Treatment Based On Liquid Biopsy


HP Florian Schilling

www.sanomni.eu

## Circulating Tumor Cells: Liquid Biopsy of Cancer

Catherine Alix-Panabières; Klaus Pantel

Clinical Chemistry , Volume 59 (1): 110 – Jan 1, 2013

Overall, there is increasing evidence that CTCs reflect cancer progression in real time and that this information may be particularly helpful in the context of systemic therapies. In the future, CTC characterization is expected to contribute to guiding specific targeted therapies to a defined population of cancer patients within a certain therapeutic window—which is the hallmark of personalized medicine.

## COMPARATIVE METHODS

| | Beads Based Method | PCR Based Method | R.G.C.C. | Microscopy Based Method | Gradien |
|---|---|---|---|---|---|
| **Method of isolation** | Magnetic Beads (antibodies with iron particles | PCR based method which need to destroy the cells in order to identify one maker (mainly panCK or Epcam) | Flow cytometric sorting with interrogation in droplets in ratio of drop-let per cell (1:1) | Immobilizing cells on a slide and staning | The cells are isola based on size |
| **Purity of CTCs** | Enrichment method and not isolation method | There are no cells any more | ***Purity is higher than 97-99% (isolation method)*** | The CTCs are simply stained not isolated | It is an enrichmen method |
| **Viability of the isolated cells** | 70-85% | No cells | ***Viability >99%*** | NO vialable cells remain | Questionable |
| **Quality of CTCs for further analysis** | Inappropriate for further molecular analysis due to lymphocyte contamination | Limited for further molecular amalysis | Appropriate for further molecular analysis since there is no noise | The CTCs are no longer viable | Not recommente further studies |
| **Selection of CTCs** | Based mainly in positive selection of CTCs in a few number of markers | Based on positive selection | Based on negative and positive selection in order to identify and secondly immunophenotyping CTCs | Posible selection method | Based on size |
| **Further abilities** | | | Identification of hetero-geneity of CTCs | The dentification of heteroge-nete depends of the selected markers | Identification of h geneity of CTCs |
| **Additional features** | Method only to enu-merate CTCs | Method to enumerate CTCs and identify only very limited features of CTCs | Method which allows to perform gene expression assays and determine features vital for therapy scheduling | A method for detection and enumeration only | |

R.G.C.C. International GmbH
Headquarters
Baarestrasse 95, Zug 6301

ASSESSMENT REPORT 1 / 2

R.G.C.C. Ltd.
Research Genetic Cancer Centre Ltd

### R.G.C.C.-RESEARCH GENETIC CANCER CENTRE LTD

**Assessment of the results:**

| | |
|---|---|
| **Patient Name:** Ms Janja Cotar | **Type of cancer:** breast |
| **Physician:** Dr Schilling Florian | **Stage:** N/A |

***Risk of relapse:***
CTC concentration
Measured: **isolated 9.3cells/7.5ml, SD +/- 0.3cells**
Cut off point <= 5cells/7.5ml

Resistance markers:
MDR1: 65%
MRP: 55%
LRP: 2%
GST: 25%

Metastases/angiogenesis risk related markers

| FUNCTION | CLINICAL RISK | MARKERS | RESULTS | OUTCOME |
|---|---|---|---|---|
| Migration-invasion | HIGH RISK | MMPs | 35% | HIGH RISK |
| | | KISS-1-r | normal | LOW RISK |
| | | Nm23 | -25% | HIGH RISK |
| Angiogenesis | HIGH RISK | VEGFr | 35% | HIGH RISK |
| | | FGFr | 40% | HIGH RISK |
| | | PDGFr | 35% | HIGH RISK |

Proliferation related markers:

| MECHANISM | CLINICAL RISK | MARKERS | RESULTS | OUTCOME |
|---|---|---|---|---|
| Signal transduction pathways | HIGH PROLIFERATIVE SIGNAL | Ras/raf/MEK/Erk1-2 | 30% | HIGH RISK |
| | | mTOR | 35% | HIGH RISK |
| Growth factor receptors | HIGH PROLIFERATIVE SIGNAL | EGFr | 40% | HIGH RISK |
| | | TGF-β1/2 | 55% | HIGH RISK |
| | | c-erb-B2 | normal | LOW RISK |
| Hormone receptors | HORMONE INDEPENDENT | Estrogen Receptor | normal | LOW RISK |
| | | Progesterone Receptor | normal | LOW RISK |
| | | NC3R4-A | normal | LOW RISK |
| | | NC3R4-B | normal | LOW RISK |
| Cell cycle rate | RAPID | P27 | 20% | LOW RISK |
| | | P16 | 35% | HIGH RISK |
| | | P53 | 35% | HIGH RISK |

Resistance phenotype markers:

| MARKERS | RESULTS | OUTCOME | PHENOTYPE |
|---|---|---|---|
| Dnmt1 | normal | LOW RISK | NON RESISTANT |
| 06-methyl-DNA-tran. | normal | LOW RISK | |
| HAT | normal | LOW RISK | |
| Histone deacetylase | normal | LOW RISK | |

***Radiotherapy/Hyperthermia sensitivity:***

| Marker | Result (%) | Clinical outcome per marker | Clinical outcome |
|---|---|---|---|
| HSP90 | **-35%** | SENSITIVE | SENSITIVE |
| HSP72 | **-10%** | SENSITIVE | |
| HSP27 | **-25%** | SENSITIVE | |

***Follow-up options:***

| | |
|---|---|
| YES | ✓ |
| NO | |

Time interval (when)

| After 3 months | After 6 months | After 12 months |
|---|---|---|
| ✓ | | |

Steps of therapy

1. Bring down resistance
2. Introduce cytotoxic procedures
3. Take care of the immune system

**RESISTANCE**

Antisense
Metabolic inhibitors
KD
HDS
Quercetin
Piperin

**CYTOTOXIC PROCEDURES**

IPT
TACE
TACP
Biological substances

**IMMUNOTHERAPY**

DC
MOAB
GcMAF

# RGCC/ BIOMED AID

RGCC technology enables the application of Integrative Oncology to our patients, giving them completely Targeted Therapeutic Strategy Options

Integrative Oncology without RGCC molecular profile places us in the position of Conventional Oncology (giving our patients therapeutic options based soley on STATISTICS but never knowing before hand on which side of the statistics they will be...).

RGCC technology is revolutionizing the practice of Oncology and BIOMED AID enables application of advanced Biotechnology.

## CONCLUSIONS

THERE IS A PARADIGM SHIFT IN CANCER RESEARCH

EMPHASIS IS BEING PLACED ON TARGETED THERAPIES

HYPERTHERMIA IS GAINING GROUND IN THE MAJORITY OF PUBLISHED STUDIES AS WELL AS CELL THERAPIES WITH DENDRITIC CELLS

ONGOING STUDIES FOCUS ON COMBINED MODALITY TREATMENTS INCLUDING COMBINATIONS OF CONVENTIONAL RT WITH HT AND CT WITH HT

5. LIQUID BIOPSIES GIVING US FULL MOLECULAR PROFILES OF CANCER CELLS AND EXPOSING THEIR RESISTANCE MECHANISMS AS WELL AS THEIR SENSITIVIES HAVE MADE THE FLEETING IMAGE OF COMPLETELY TARGETED THERAPIES A REALITY. MORE AND MORE RESEARCH INTO BIOLOGICAL AND NATURAL AGENTS HAVE ENABLED LESS TOXIC APPROACHES.

## Vitamin C and Hyperthermia

**Enhancement of radical intensity and cytotoxic activity of ascorbate by hyperthermia.**

The combination of hyperthermia and ascorbate treatment might produce higher antitumor activity.

Satoh K, Sakagami H, Nakamura K

Anticancer Res; 16(5A):2987-91 1996

**Oncological Studies at Universities II**

**Phase I/II studies at Roswell Park Cancer Institute Buffalo, E Repasky, W Kraybill**

Phase 1- Study of Fever-Range Whole-Body Hyperthermia in Patients with Advanced Solid Tumours

⇨ Int J Hyperthermia, 2002, VOL.18, NO.3

Phase 1- Study of Doxil with Long Term Low Level WBH

⇨ Abstract STM 2007

**Phase I/II studies at Univ. of Texas, Medical School at Houston, JM Bull**

FR-WBH + Cisplatin (CIS) + Gemcitabine (GEM) + Metronomic, Low-Dose Interferon-alpha

CIS 24h before FR WBH/GEM

Running protocol with various tumor entities, mainly pancreatic cancer

⇨ Int J Hyperthermia, Dec 2008

⇨ http://www.uth.tmc.edu/thermaltherapy/

**Breast CA** (Jones et al 2007 + 2005 Duke Univ.) 2007

randomised Phase III and Phase I Trials

109 Patients with breast CA close to skinsurface

Comprehensive response rate of 68,1 % (radiation + HT)

vs. 42,3% (radiation alone)

Most significant difference with patients previously radiated :

68,2% in radiation+ HT

vs. 23,5 % radiation alone

*( Jones et. al., Journal of Clinical Oncology Vol. 23, No 13, May 1, 2005.)*

In an extension usig thermo-sensitive Liposomen as carrier of Doxorubicin running as phase I trial, the autors came to a cautious concluding , thate here as well hyperthermia with a liposomal-thermosensitiven chemotherapy seems to enhance „anti-tumor-effects" . *(Jones et al, June 2007, 24th Annual Meeting of ESHO, Prag, Abstracts S. 11)*

**Cervix Tumor** (Van der Zee, Franckena et al) 2007

(randomised Phase III trial incl. Follow-Up)

Follow-Up : long time survival after 12 years

58 Patients (Rad.+HT) vs. 56 Patients (Rad. alone)

* Better lokal Control: 36 % (radiation alone)
  vs. 56 % (radiation + HT)

* overall Survival after12 years: 20 % (radiation alone)
  vs. 37 % (radiation + HT)
  (at p= 0,02)

*(Franckena et al, June 2007, 24th Annual Meeting of ESHO, Prag, Abstracts S. 18)*
*Bezug auf: Van der Zee J, Gonzalez Gonzalez D, van Rhoon GC, van Dijk JD, van Putten WL, Hart AA. Comparison of radiotherapy alone with radiotherapy plus hyperthermia in locally advanced pelvic tumors: a prospective randomized multicentric trial. Lancet 200; 335: S.1119-1125*

## Hyperthermia successes:

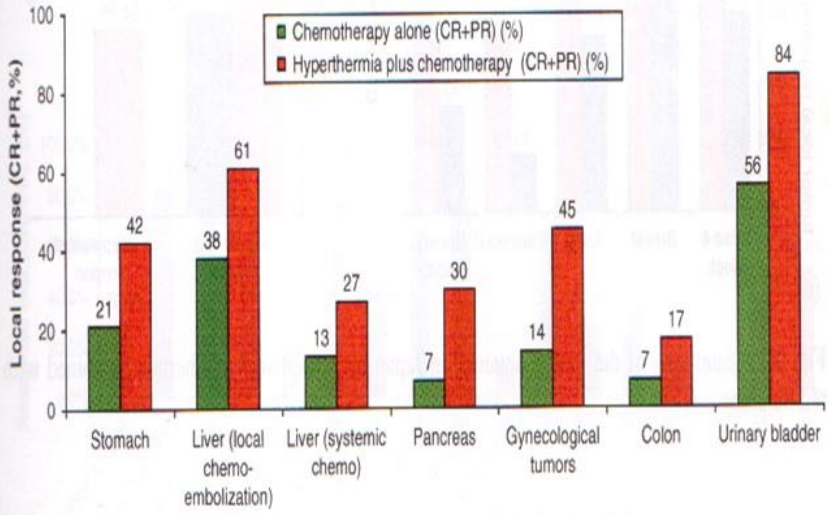
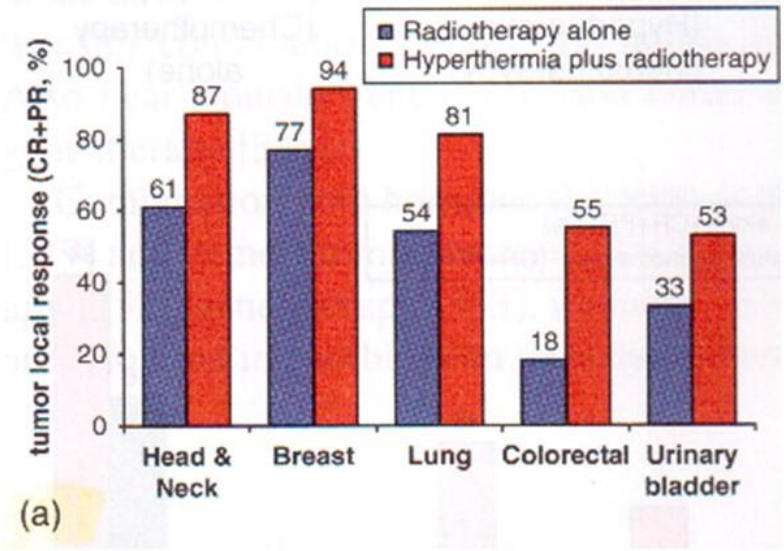
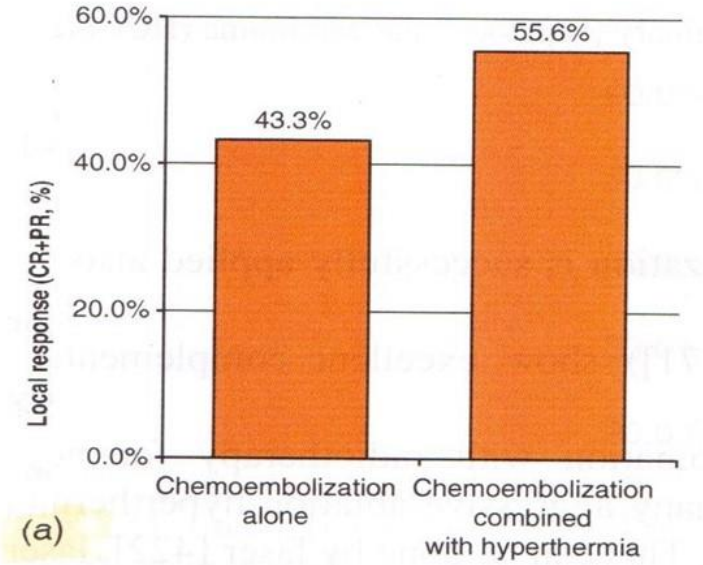



**Fig. 2.20** Local response of hyperthermia plus chemotherapy compared to chemotherapy alone. (Chemotherapy is mostly Adriamycin, Bleomycin, Cisplatin, Mitomycin, and 5FU), (Hyperthermia 40–60 min, capacitive, 8 MHz, 4–16 lesions)




Summary of the results obtained in Japan by capacitive hyperthermia combined with radiotherapy.

Hepatocellular carcinoma and metastatic tumors of the liver.



# Trials in combination with radiation therapy

| Tumorart | Anzahl der Studien. | Anzahl Patienten /Regionen | Strahlentherapie allein (%) | Strahlentherapie + Hyperthermie (%) | Odds ratio (95% CI) (CI-Confidence ratio) |
|---|---|---|---|---|---|
| Breast | 2 | 143 | 67 | 68 | 1.06 (0.52–2.14) |
| Cheast Wall | 4 | 276 | 38 | 59 | 2.37 (1.46–3.86) |
| Cervix | 4 | 248 | 52 | 77 | 3.05 (1.77–5.27) |
| Rectum | 2 | 258 | 9 | 19 | 2.27 (1.08–4.76) |
| Bladder | 1 | 101 | 51 | 73 | 2.61 (1.14–5.98) |
| Prostata | 1 | 49 | 79 | 81 | 1.16 (0.28–4.77) |
| Melanom | 1 | 70/128 | 31 | 56 | 2.81 (1.36–5.80) |
| Head & Neck | 5 | 274 | 33 | 51 | 2.08 (1.28–3.39) |
| Diverse | 3 | 442 | 34 | 39 | 1.24 (0.84–1.82) |
| All Studies | 23 | 1861 | 38 | 52 | 1.80 (1.50–2.16) |

Journal of Clinical Oncology 19: 2007 Horseman/Overgaard

Meta-Analysis on radiation alone versus radiation plus hyperthermia

The authors concluding: if taken all these clinical results (1861 Patienten from 23 Studies) it shows a highly significant benefit ($P < 0.0001$) that confirms the rationell of a combined efficacy of radiation with hyprthermia. That result stands besides the fact that there were quite different treatment protocols in the various tumor entities (dito p.423).

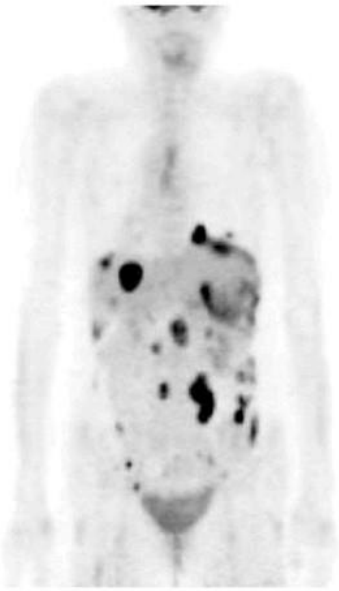


**Figure 1**
SM's PET-Scan taken in January 2007
The PET-Scan shows a massive infiltration in the peritoneum, the lymph nodes, liver, and spleen. The patient was at this time untreatable because of multidrug resistance.

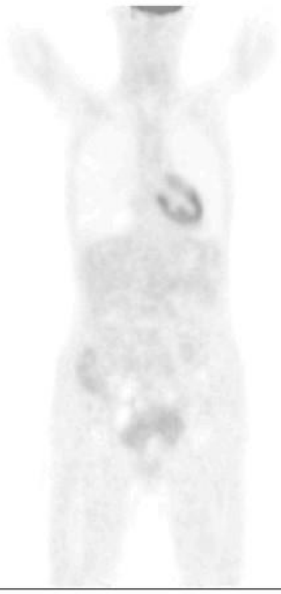
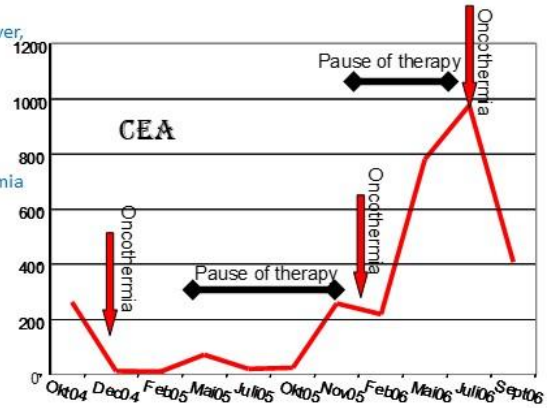
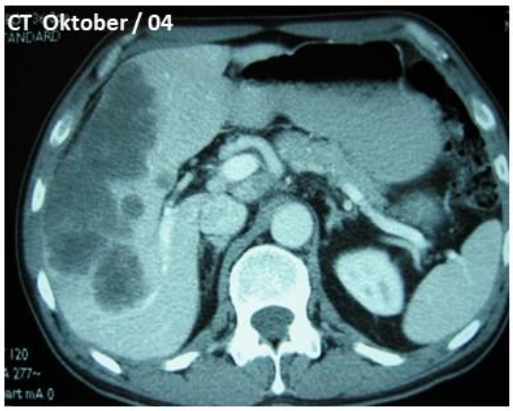


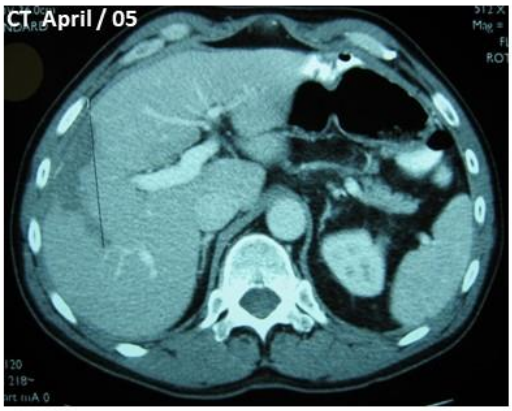
**Figure 2**
SM after treatment at St. George Hospital with two whole body hyperthermias, local hyperthermia, and a complementary nontoxic cancer treatment program. No hot spots are visible; patient is in a complete remission. See also Figure 3.

# Colon (transversum) carcinoma

**Investigator:** Prof.H.Kirchner
**Department:** Department of Hematology & Oncology, Hospital Siloah, Hannover, Germany
**Patient:** B.Z. 61 y, male
**Diagnosis:** Colon transversum carcinoma, Sep.2004,
**Surgery:** Hemicolektomie,
**Tumor classification:** pT4, pN2, M1 (Liver);
**Therapy (1):** Oxalyplatine, Leukovorine, 5-FU (Oct.2004-Apr.2005),+ oncothermia on liver Dec.2004.
**Therapy (2):** Erbitux, Campto (Mar.2006) + oncothermia on liver
**Result (1):** Good partial remission (PR) (May.2005-Mar.2006)
**Therapy-pause**
**Result (2):** Progressive disease (PD)
**Therapy (3):** Erbitux, Campto (Jul.2006-Oct.2006) + oncothermia (liver)
**Result (3):** Good partial remission (PR) tumor and tumor marker regression, became normal

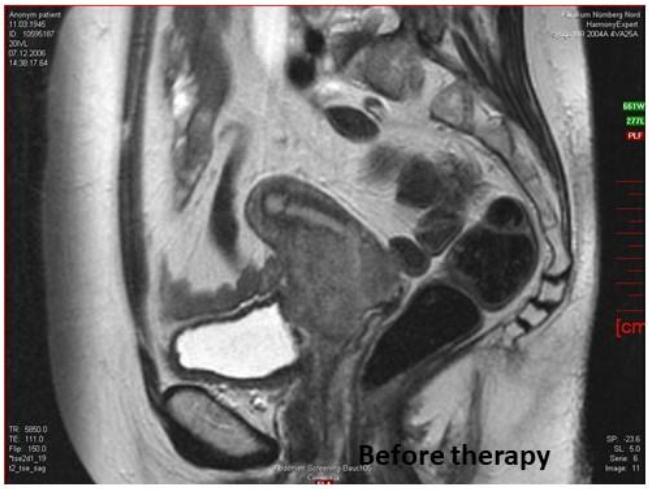


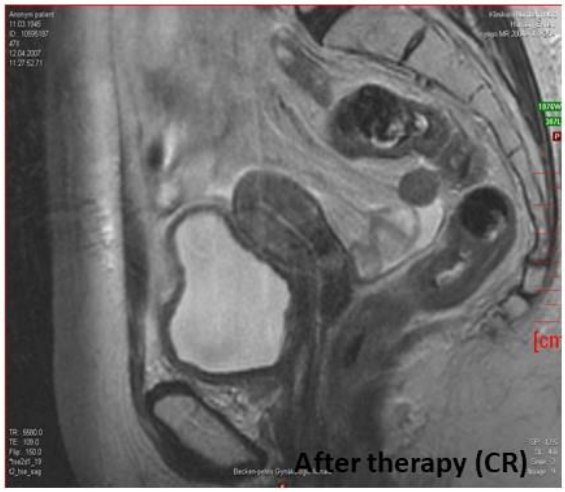




# Cervix carcinoma

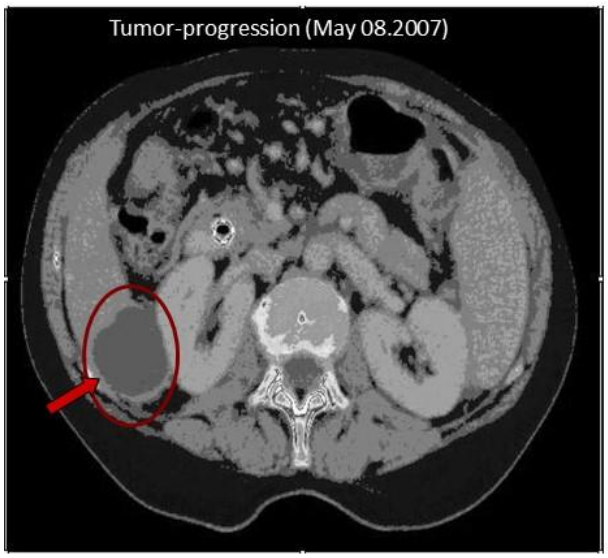
**Investigator:** Prof. H. Renner
**Department:** Klinikum Nord, Nürnberg, Germany
**Patient** H.K, 61 y, female; Cervix carcinoma; cT4 cN0 M0 G3
**Histology:** Squamous cell carcinoma;
**Therapy:** 12/06-01/07 bimodality therapy, Radiotherapy: 50.4 Gy; (5x1.8 Gy/weeks); oncothermia: 6 sessions.
**Control:** 3 months later hysterectomy (Wertheim).
**Result:** pathologically complete remission ypT0ypN0

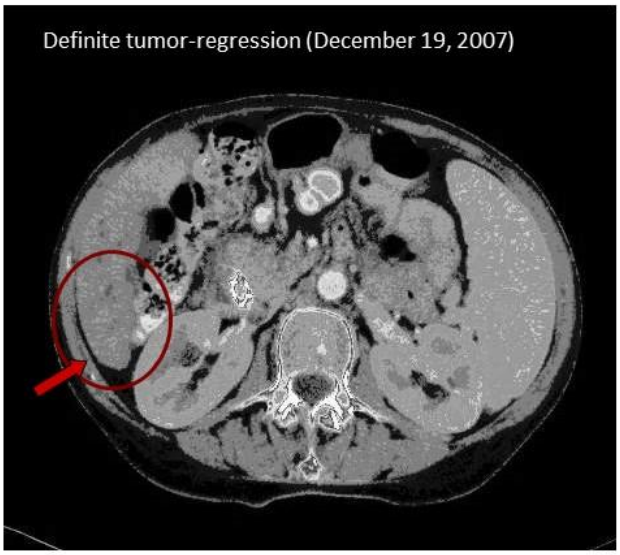


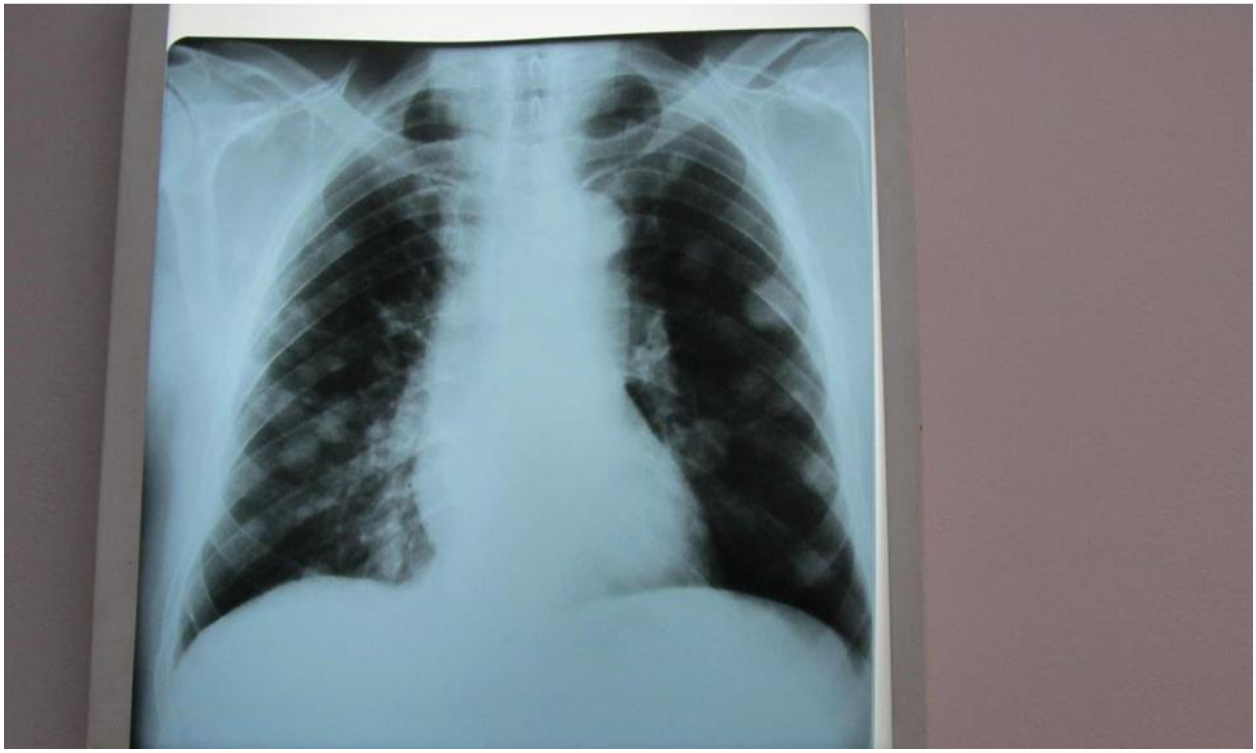
# Intrahepatic bile-duct carcinoma

**Investigator:** Dr. A.Csejtey & Mr.P.Lorentz
**Institution:** Markusovsky Hospital, Szombathely, Hungary,
**Diagnosis:** Intrahepatic bile-duct carcinoma, inoperable
**Therapy:** Oncothermia as monotherapy with concomitant supportive vitamins only.
Due to the patient's status, no any other therapies was possible. Oncothermia started (June14.2007)
**Prognosis**: overall median survival 6 months
**Results:** Complete remission (CR)
**Follow up:** last checkup Sept. 2009, symptom-free, tumor-free

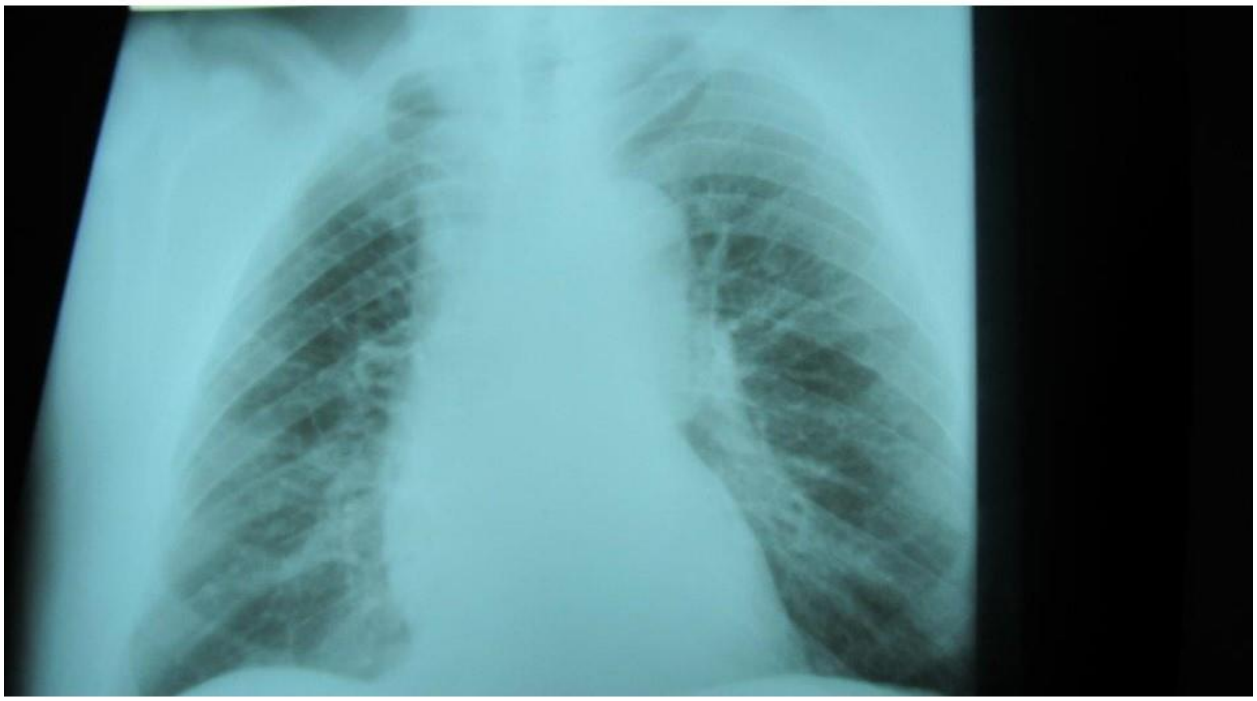



A PATIENT OF OURS WITH MULTIPLE PULMONARY METASTASES WHO HAD A COMPLETE REMISSION IN 6 MONTHS WITH INTEGRATIVE TREATMENT AND mEHT



# 6 MONTHS LATER



**HIV-positive patient with multiple myeloma and Lymphoma from 2016. The role of mEHT.**

Patient with multiple myeloma and Lymphoma that started from the palate, with a history of immunosuppression(, AIDS). After 3 sessions of mEHT in June 2018, parallel to his chemotherapy, a remission of the disease was observed. At that point, he decides to interrupt mEHT and continue soley with chemotherapy. in the duration of stops in the middle of sessions and continue with chemotherapy . Results: The disease relapses and the extension of the disease into adjacent tissues. The patient returned in mid-August in the center of personalized Oncology and began anew his therapy with mEHT sessions. Today significant remission of the disease with mEHT as monotherapy , depicting extensive liquification of the previous tumors.

04/10/2017 status: (CT Visceral Cranium): "Invasive soft tissue CT 68 x 45 mm, with erosion of adjacent bone jaw citizens and lower parts of the sinuses. 12/02/2018 status: (CT Visceral Cranium): "Invasive CT soft tissue X22 44 mm, with erosion of adjacent maxillary bone and the lower parts of the sinuses.Multiple osteolytic masses in the bones of the skull and infiltration of soft tissue (meta-disease), the greater lesion isfrontal right 29Ch28 mm.
Sensitivity to mEHT.Documented through measurement of levels of HSP'S(27, 72 and 90)
**CONCLUSION**-An Integrative Oncology Centre with hyperthermia should have very specific characteristics in order to meet the difficult challenges of the times. The ability to evaluate the molecular and genetic profile of individual cancer cells , creates a definite advantage and doubles the response rates of patients who have failed conventional treatment modalities. On the basis of our patients profiles it seems that 85% of the patients have sensitivity to Hyperthermia (as expressed by measuring HSP levels). Even patients undergoing chemotherapy (non targeted) continue to respond even when chemo is interrupted.

**SUBJECT:** the combination of ozone with mEHT in combination with blood alkalynization and high dose Viatmin C , in multiple metastatic bone disease from prostate Ca for control of disease symptoms and avoidance of the risk of further damage to the maxillary bone of Osteoradionecrosis due to RT(radiation therapy) in very extensive metastatic focus in the left mandible

**INTRODUCTION:** In prostate cancer of this stage it is common to see the presence of distant metastases. The situation becomes much more difficult when metastatic foci are identified in bones of the jaw. In the stage VI of prostate Ca, therapy must be highly personalized with the best supportive care of the patient to relieve symptoms of pain and avoiding automatic fractures and should include Hormonal manipulations, the use of bisphosphonate, Surgery, Chemotherapy and or radiotherapy.But we should not ignore and use hyperbaric oxygen (or ozone) where necessary to maintain as far as possible the quality of life in patients ' daily lives as is in this case the mastication function.

Presentation incident: Patient 65 years with meta-disease of Prostate Biopsy 20/12/2014 Ca: AdenoCa 4 + 3 = 7/10 by Gleason 4/5/2018 State (CT-scanning): multiple bone lesions scattered the bones of the skeleton especially in the vertebrae and the pelvis and strong fixation of radiolabled Tc on the left upper jaw, attributed to metastatic disease. Hormonal manipulations with the X-120 Geva formulations mg and 80 mg Firmagon Condition 8/8/2018 gave no response and added considerable morbidity (Medical radiological diagnosis) area #37, 38 teeth molars until the angle of the mandible and with the extended subperiosteal reaction (2.9 cm) with irregularly shaped core osteolytic imagery indicative metastatic flare. 8/8/2018 status: (CT of lumbar Spine): extensive osteoblastic and mixed lesions.

**METHODS:** the sensitivity to mEHT. Documented through measurement of levels HSP'S (27, 72, and 90).

Results: Date Value Comments 16/12/2014 100.20 PSA ng/ml ng/ml 05/01/2015 15.92 21/01/2015 2.18 ng/ml ng/ml 0.81 18/02/2015 18/12/2015 0.55 15/01/2016 0.27 ng/ml ng/ml ng/ml 11/03/2016 0.14 0.12 ng/ml 16/01/2017 07/04/ 2017 0.90 ng/ml ng/ml 27/04/2017 0.75 Total testosterone: 0.11 ng/ml ng/ml 09/02/2018 27.71 07/05/2018 281 ng/ml ng/ml 05/06/2018 176.5 Introduction the Oncothermia Center and starting with 2 y fields mEHT (abdominal covering prostate and lumbar areas ,and the left mandible with extensive osteolytic disease) with O3 autotransfusion of Ozonated blood and Vitamin C and hormone therapy(LHRH analogue) with Bisphosphonates, in 6 weeks and impressive drop to 28 ng/ml PSA CT-scan "04/08/2018 significant improvement. Bone Scan also indicates clear response of osteolytic lesions. CURRENT PERFORMANCE STATUS: 85-95% (Karnofsky) vs 50% previously.

**CONCLUSIONS:** Even stage IV disease with very poor performance status can be treated with an Integrative approach using Oncothermia as a pivot point for therapeutic strategy.

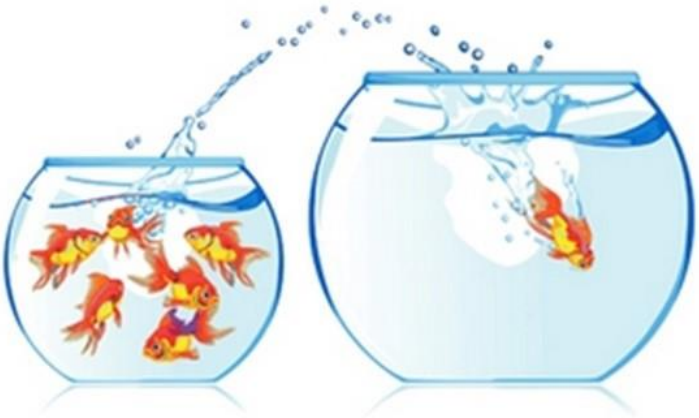
KEEPING BALANCES, FOR THE GOOD OF OUR PATIENTS IS OFTEN VERY DIFFICULT

## We are still sailing in unchartered waters and making new maps

## IT'S JUST A MATTER OF TIME…

# BEFORE WE SEE HAPPY PATIENTS!!


# ALL WE HAVE TO DO IS TAKE THE LEAP!!



## INTEGRATIVE ONCOLOGY…THE DIFFICULT BUT RIGHT PATH

"Two roads diverged in a wood, and I—
I took the one less traveled by,
And that has made all the difference"

Robert Frost, New England Wisdom

ALWAYS KEEPING OUR GOALS SKY-HIGH AND STRIVING TO ACHIEVE THEM

# KÖSZÖNÖMA FIGYELMET