

MAC-CAM Interest Group meeting in the European Parliament on March 27th, 2012

CAM for Prevention and Integrated Treatment of Cancer

Prof. Dr. Gustav Dobos
Kliniken Essen-Mitte, Germany
Academic teaching hospital of the
University Duisburg-Essen



From CAM to Integrative Medicine

Complementary and Alternative Medicine (CAM)

Mostly traditional healing techniques
Inexpensive, safe, beneficial



Integrative Medicine

The best of evidence-based CAM in conjunction
with mainstream care

Integrative Medicine

Integrative Medicine combines mainstream medical therapies and CAM therapies for which there is some high-quality scientific evidence of safety and effectiveness.

Definition of the NCCAM, NIH



Model: *Integrative Oncology*

Integrative Oncology combines scientifically proven, mostly traditional healing methods with mainstream medicine to reduce side-effects and treat patients with cancer more effectively.



What are realistic aims of *Integrative Oncology*?

... to improve:

- management of side-effects of chemotherapy (fatigue, nausea, xerostomia, joint pain, postmenopausal symptoms)
- physical and psychological fitness
- quality of life (improves depression, distress, helplessness/ hopelessness and anxiety)
- patient compliance (reduced therapy stop)
- ... can serve as prophylaxis (primary and secondary)
- ... can serve as motivation for lifestyle change
- prognosis?!

Methods/systems used in „CAM/Integrative Oncology“

- Nutrition
- Exercise
- Mind/Body Medicine (Salutogenesis)
- Meditation
- Mindfulness based stress reduction
- Spirituality
- Acupuncture
- Chinese herbal treatment
- Herbal treatment
- Vitamins and trace-elements
- Massage
- Reflexology



Whole system approaches

- **Homeopathy**
- **Anthroposophic Medicine**
- **TCM**
- **Ayurveda**
- **Phytotherapy**
- **Shiatsu**
- **Naturopathy**



Homeopathy



Homeopathy and Cancer - Facts

Swiss HTA report: sufficient supporting evidence for the pre-clinical and clinical effects of homeopathy; a safe and cost-effective treatment.

As to cancer:

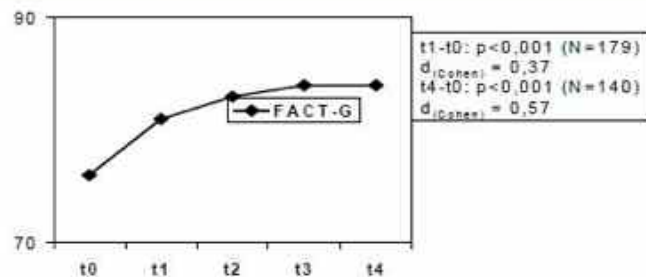
Small amount of evidence to indicate it can be useful in treating the side-effects of conventional cancer treatment and helping with patient recovery.



Homeopathy and Cancer - Evidence

Prospective cohort study (Rostock et al., BMC Cancer, 2011)

Quality of Life (FACT-G)



t0 (n=250) t1 (n=179) t4 (n=140)

FACT-G			
Mean (SD)	75.6 (14.6)	81.1 (16.9)***	84.1 (15.5)***
FACIT-Sp			
Mean (SD)	32.1 (8.2)	34.9 (8.32)***	35.2 (8.6)***

[p < 0.05 *, p < 0.01 **, p < 0.001 ***]

MFI (Conventional Care Homeopathy)

	t0 Mean (SD)	T1 Mean (SD)	T4 Mean (SD)
General Fatigue	11.9 (3.2)	12.0 (2.7)	11.8 (2.7)
Physical Fatigue	11.9 (2.6)	11.3 (2.6)**	11.1 (2.6)**
Reduced Activity	11.6 (5.2)	12.1 (5.2)	10.7 (4.9)**
Reduced Motivation	11.9 (5.2)	10.4 (5.2)***	9.5 (4.9)***
Mental Fatigue	11.8 (5.4)	11.5 (5.3)	10.5 (4.9)***
	11.8 (4.8)	10.4 (5.0)***	9.5 (4.7)***
	9.1 (4.4)	9.0 (4.0)	8.7 (3.7)*
	8.8 (3.5)	8.0 (3.9)**	7.4 (3.2)***
	9.8 (5.0)	9.3 (4.7)*	9.8 (4.8)
	10.6 (4.6)	9.3 (4.7)***	8.3 (4.0)***

[p < 0.05 *, p < 0.01 **, p < 0.001 ***]

Authors' conclusions

"[...] we observed an improvement of quality of life as well as a tendency of fatigue symptoms to decrease in cancer patients under complementary homeopathic treatment."

Acupuncture



***Integrative Oncology* patient care in breast cancer out-patients clinic**



- **acupuncture**
 - after each chemotherapy
 - 2 x during radiation
 - 4 x during endocrine therapy
 - against pain and other side-effects in each treatment phase
- **number of acupuncture sessions 2011**

▪ ear acupuncture	1.587
▪ body acupuncture	560
▪ trigger acupuncture	78
▪ electro acupuncture	41

Acupuncture in cancer care

How is the evidence?



Proven efficacy for chemotherapy-related side effects

- **Pain** (White P. 2004)
- **Nausea and Vomiting** (Shen J. 2000)
- **Headache** (Vickers A. 2004)
- **Arthritis** (Berman B. 2004)
- **Neuropathy** (Wong R. 2006, Schroder S. 2007)
- **Xerostomia** (Johnstone 2002, Pfister D 2008)
- **Hot Flashes** (Huang M. 2006)



Chinese herbal therapy



A Prospective, Controlled Study of the Botanical Compound Mixture LCS101 for Chemotherapy-Induced Hematological Complications in Breast Cancer

Yaal-Hahoshen et al. *The Oncologist* 2011

Conclusion

The addition of LCS101 to anthracycline- and taxane-based chemotherapy is safe and well tolerated, and may significantly prevent some chemotherapy-induced hematological toxicities in early breast cancer patients. These results should encourage further larger and more extensive clinical trials.

Herbs, nutrition and dietary supplements

Mistletoe

Soy

Selenium

Medicinal mushrooms (e.g. Maitake)

Zinc

...

Concerns:

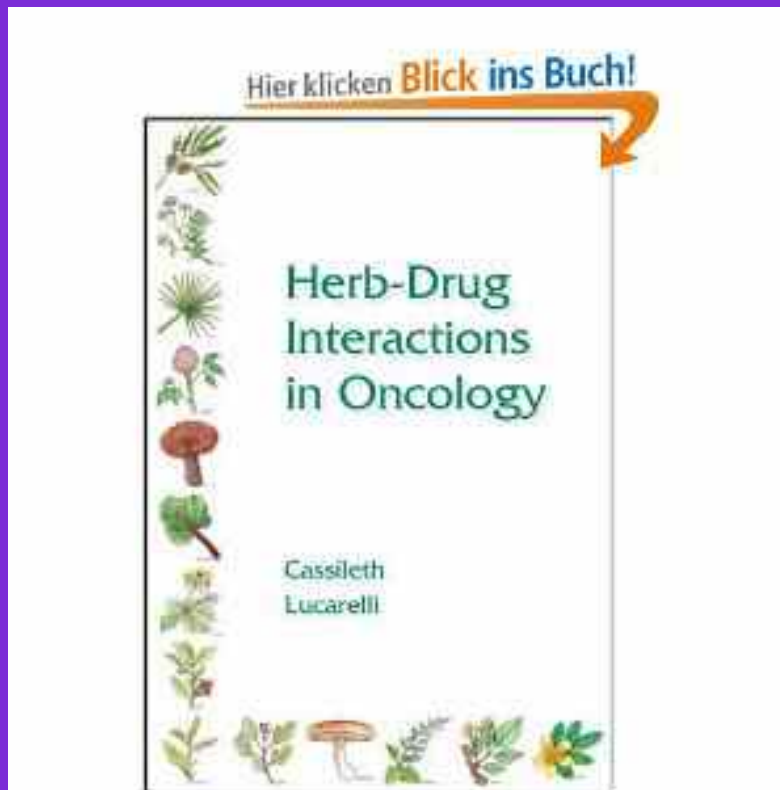
Contamination

Dosage and toxicity

Herb-drug interactions



Do Chinese and other herbs really decrease side-effects of chemotherapy, or do they only decrease the general effectiveness of the chemotherapy?



Cytochrom P450 3A4

Important isoenzyme:
Cyclophosphamide

Doxorubicin

Vinblastin

Tamoxifen

Amitriptylin

Potential interactions with chemotherapy or antihormone therapy

Echinacea
Ephedra
Ginkgo
St. John's wort
Soy
Valerian
Red clover
Peppermint
Grapefruit juice
...



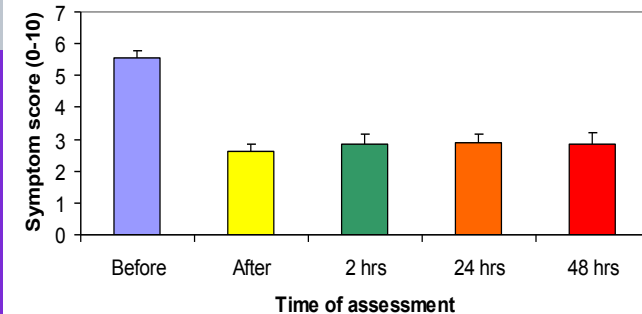
Chinese foot massage



Chinese foot massage

按摩前后的症状评分

Symptom scores before and after massage therapy N=98



Reduction of anxiety, pain, nausea, fatigue, depression, and improves quality of life

Safe when performed by trained and experienced practitioners

Mind/Body Medicine

Def.: NIH

„Mind/Body Medicine focuses on the *interactions among the brain, mind, body and behavior* and the powerful ways in which *emotional, mental, social, spiritual and behavioral factors* can directly affect health. It regards as fundamental an approach that respects and enhances each person's capacity for *self-knowledge* and *self-care* and it emphasizes techniques that are grounded in this approach.“



Mind/Body Medicine

NIH

„Mind/Body Medicine
Are interventions,
that use a variety of techniques
designed to facilitate
the mind's capacity
to affect bodily function
and symptoms“

nutrition

social
support

exercise

cognitive
restructuring

relaxation
mindfulness
(MBSR)

stress-
management

Team of Mind/Body Instructors - non-medical practitioners -

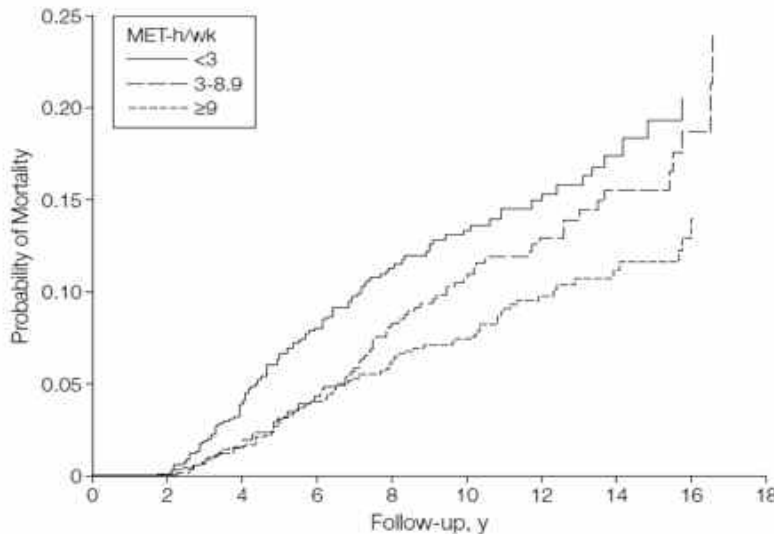
MBSR-teacher
Psychologist
Psycho-Oncologist
Sportstherapists
Nutritionists
Physiotherapists

Other nmp:

CAM-practitioners
Nurses
Body work and
massage therapists



Physical activity after breast cancer diagnosis



No. at Risk									
Physical Activity, MET-h/wk									
<3	959	957	809	573	407	286	222	83	43
3-8.9	862	862	767	569	489	372	184	84	31
≥9	1166	1166	1066	773	692	449	290	164	86

MET indicates metabolic equivalent task.

(Holmes et al., 2005)

... it can reduce the risk of death after diagnosis

... it can reduce fatigue, psychological symptoms and enhance health-related quality of life

The impact of nutrition and exercise on survival in breast cancer patients

Pierce study (Pierce et al., 2007) :

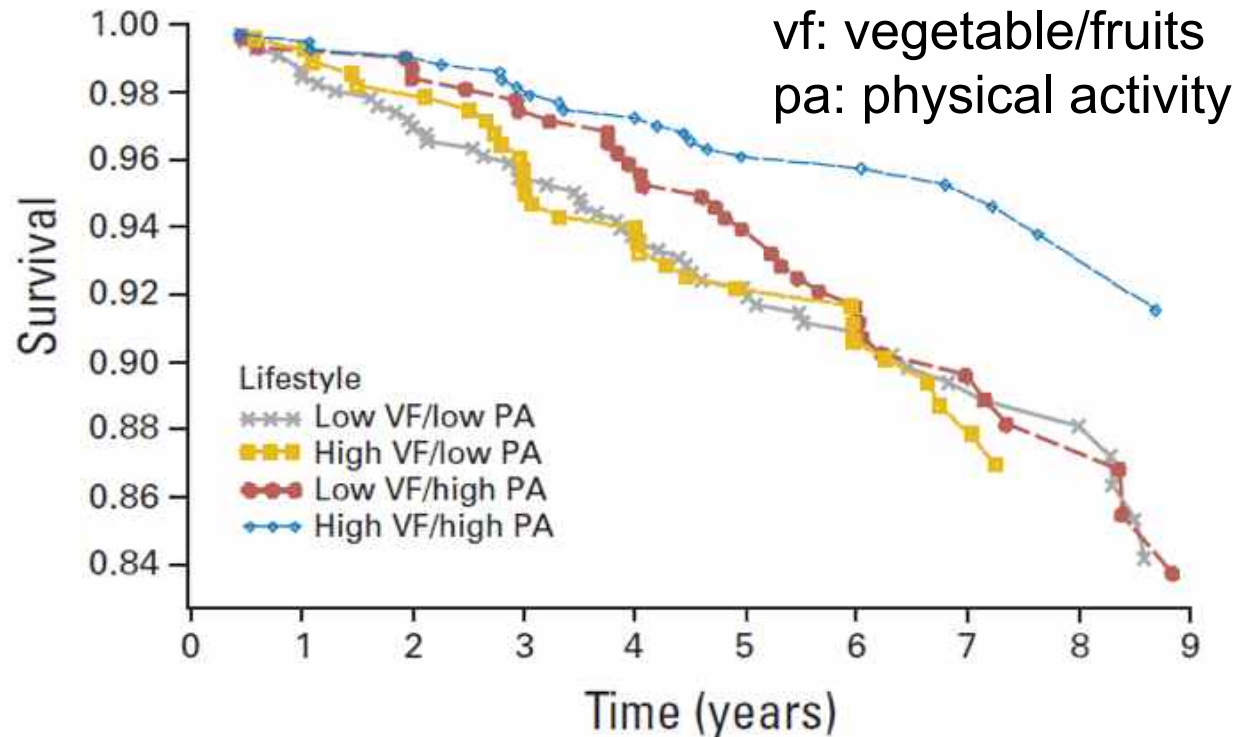
Large prospective study: 1490 breast cancer survivors

Follow-up: 10 years

Physical activity: corresponding to 30 minutes
6x/week

Nutrition/diet: daily intake of 5 portions of
fruits and vegetable/day

Survival rates (Pierce et al., 2007)



... mortality rate
reduced by 50%!

The combination of regular physical activity and intake of 5 portions of fruits/vegetable per day yields the best increase in survival rates among breast cancer survivors.

The specific situation in cancer patients ...

... the diagnosis, *CANCER* can be compared to an earthquake on *Richterscale* of 8, only that it happens on 1m².

Quotation of a cancer patient

Mindfulness-Based Stress Reduction (MBSR) for Integrative Cancer Care – a Summary of Evidence

Musial et al. 2011

19 studies were found to be eligible.

Conclusion:

There is evidence that MBSR can improve mood and distress in cancer patients, while physical symptoms are unlikely to improve as a consequence of MBSR interventions.

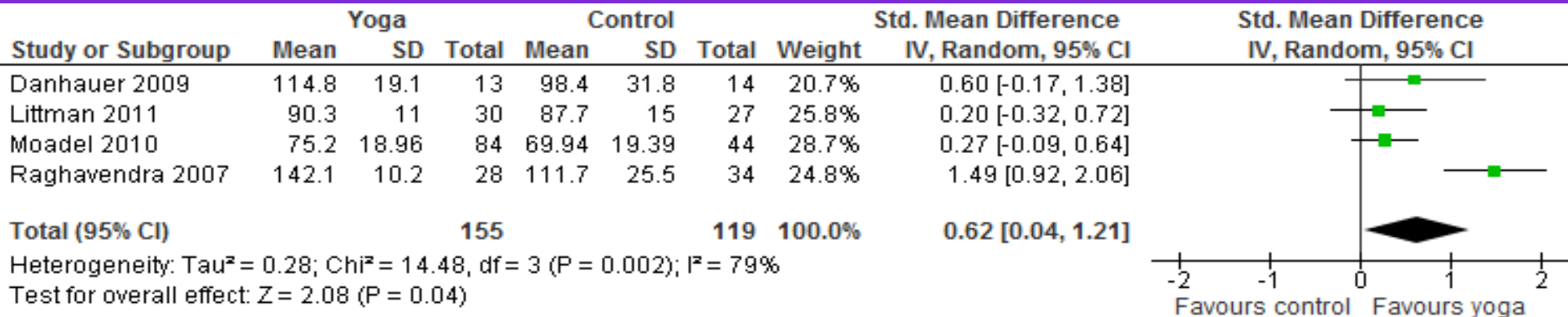


Yoga in breast cancer



Meta-analysis: Yoga in breast cancer

General quality of life



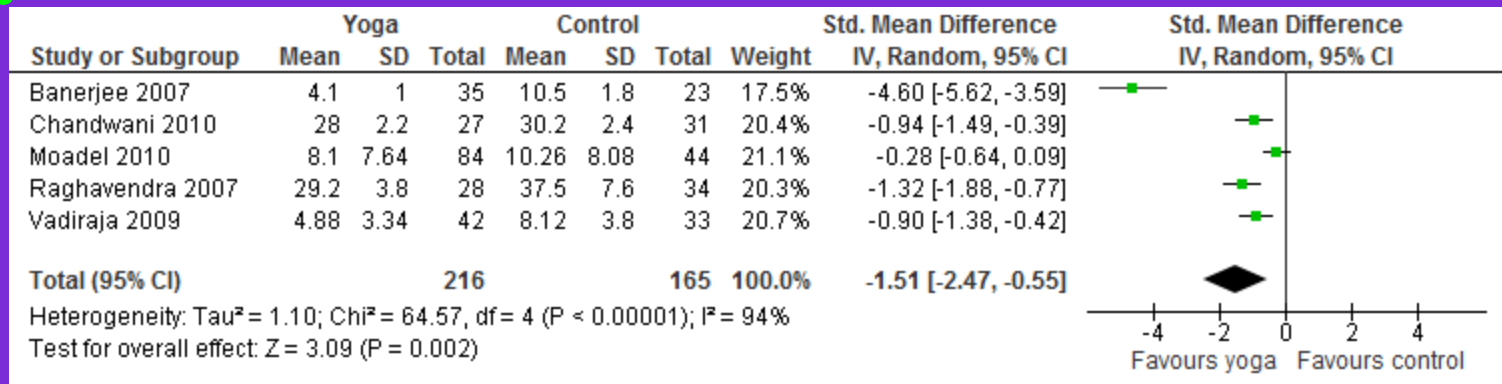
Medium effect on GQL

Cramer H, Lange S, Klose P, Paul A, Dobos G (2011): Yoga for promoting quality of life and psychological health in patients with breast cancer - a systematic review and meta-analysis.

Meta-analysis: Yoga in breast cancer

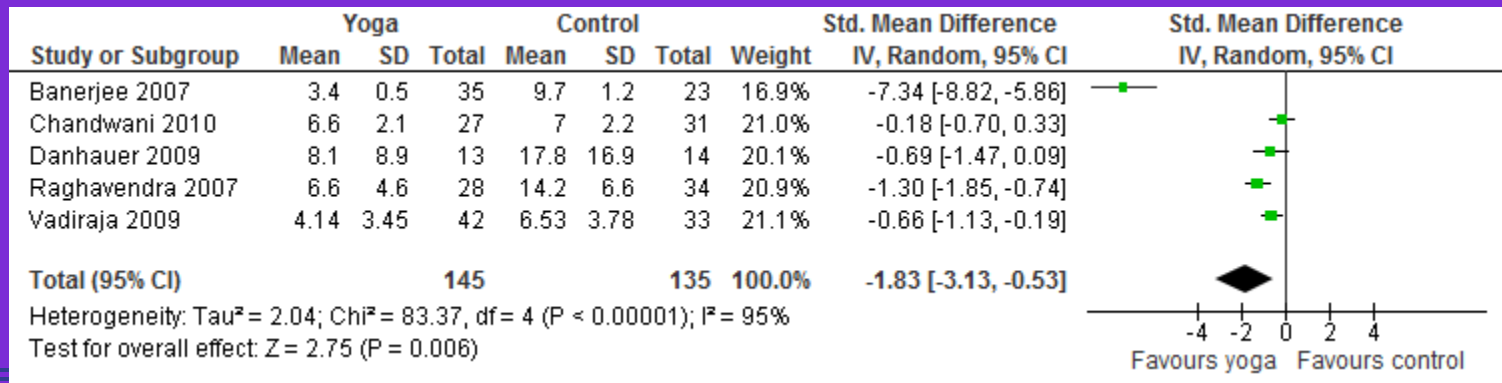
Anxiety

... strong effect on anxiety!



Depression

... strong effect on depression!



Guidelines of the German Society for Obstetric Oncology (AGO) 2011:

	Oxford / AGO LoE / GR		
	<hr/>		
• MBSR (Mindfulness-Based Stress Reduction)	2b	B	+
• Yoga	2b	B	+

Lifestyle/Mind/Body Medicine Cancer Program

1. learn to elicitate the *Relaxation Response*
2. healthy diet
3. exercise
4. behavioural elements (cognitive restructuring)
5. social group support (→ self help group)



Which are the crucial aims for the integration of holistic approaches and CAM into cancer treatment?

- identify functioning models for “*Integrative Oncology*”
Team work is crucial and therefore the acceptance of all therapists!
- scientific evaluation (evidence supporting the efficacy, safety and costs)
-> GET FUNDING!
- developing curricula for students, physicians, oncologists and non-medical practitioners



