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Guidelines Breast
Version 2021.1E

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FORSCHEN
LEHREN
HEILEN

Diagnosis and Treatment of Patients with early and advanced Breast Cancer

Complementary Therapy Survivorship

Screened Data Sources:

Pubmed	2012 - 01/2020
ASCO	2015 – 2019
SABCS	2015 – 2019
EBCC	2015 – 2019
Cochrane library:	summary Jan. 2020:



Complementary Therapy – Hormonal Treatment and Alternatives in Breast Cancer Survivors – Survivorship

▪ Versions 2002–2020:

Albert / Bauerfeind / Blohmer / Fersis / Friedrich / Gerber / Göhring / Hanf / Janni / Kümmel / Lück / von Minckwitz / Nitz / Oberhoff / Rhiem / Scharl / Schmidt / Schütz / Thomssen / Kümmel / Schütz

▪ Version 2021:

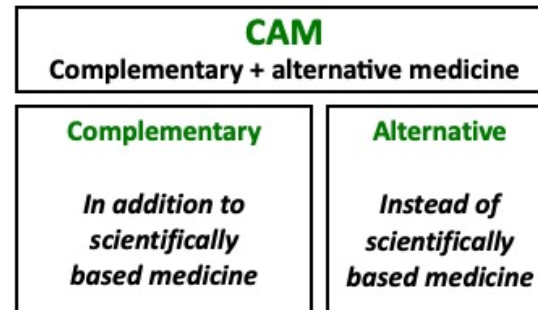
Dall / Solomayer

Screened Data Sources:

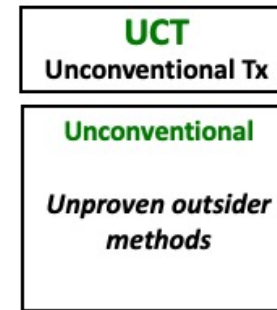
Pubmed	2012 - 01/2021
ASCO	2015 – 2020
SABCS	2015 – 2020
EBCC	2015 – 2020
Cochrane library:	summary Jan. 2021:

CAM

„Integrative Oncology“



„Unconventional methods“



Komplementäre Verfahren werden parallel zur konventionellen Therapie angewendet und unterscheiden sich von alternativen Verfahren dadurch, dass sie den Wert der konventionellen Verfahren nicht in Frage stellen, sondern sich als Ergänzung verstehen.

“Integrative oncology is a patient-centered, evidence-informed field of cancer care that utilizes mind and body practices, natural products, and/or lifestyle modifications from different traditions alongside conventional cancer treatments. Integrative oncology aims to optimize health, quality of life, and clinical outcomes across the cancer care continuum and to empower people to prevent cancer and become active participants before, during, and beyond cancer treatment.”

Onkolleitlinienprogramm

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Good clinical practice

- **All patients should be asked as early as possible and repeatedly during the course of the process regarding the interest in information complementary medical measures and, if interested, reliable sources of information should be referred.**

S3 LL "Komplementärmedizin in der Behandlung von onkologischen PatientInnen"

Literatur S3 LL "Komplementärmedizin in der Behandlung von onkologischen PatientInnen"

General Considerations

- **CAM instead of loco-regional interventions**
- **CAM instead of systemic treatment**
- **Patients should be asked and advised about their use of CAM modalities**
- **Diagnostic procedures in connection with complementary and alternative therapy concepts without evidence (e.g. iris diagnostics, bioresonance) should not be recommended.**
- **During anti-cancer treatment: Beware of drug interactions**

Oxford		
LoE	GR	AGO
2b	B	--
2b	B	--

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Complementary Therapy Pre- and Postoperative

	Oxford		
	LoE	GR	AGO
Preoperative:			
▪ Hypnosis (reduces anxiety, pain, nausea)	1b	B	+
Postoperative:			
▪ Acupuncture (pain relief, anxiety)	1b	B	+/-
▪ Acupuncture (nausea, vomiting)	2b	B	+
▪ Massage therapy (pain relief)	2b	C	+/-
▪ Early postoperative exercise reduces upper-limb dysfunction (beware: increased wound drainage)	1a	A	+
▪ Physical exercise			
▪ to reduce breast cancer related secondary lymphedema	1a	A	+
▪ as a prophylaxis of lymph edema	1b	B	+/-
▪ Prophylactic lymphatic drainage	1b	B	--
▪ Yoga (arm and shoulder pain)	2b	C	+
▪ Music therapy (reduces pain after mastectomy)	2b	C	+/-

Hypnosis

1. Amraoui J, Pouliquen C, Fraisse J et al. (2018) Effects of a Hypnosis Session Before General Anesthesia on Postoperative Outcomes in Patients Who Underwent Minor Breast Cancer Surgery: The HYPNOSEIN Randomized Clinical Trial. JAMA Netw Open.;1(4):e181164. doi: 10.1001/jamanetworkopen.2018.1164.
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Acupuncture and Postoperative Nausea and Vomiting / Pain

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Massage Therapy

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Postoperative exercise

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Reduction secondary lymphedema

1. Baumann FT, Reike A, Reimer V et al: Effects of physical exercise on breast cancer –related secondary lymphedema : a systematic review Br Ca res Treatment 2018; 170: 1-13

Prevention lymphedema

1. Ammitzbøll G, Johansen C, Lanng C, Andersen EW et al.. Progressive resistance training to prevent arm lymphedema in the first year after breast cancer surgery: Results of a randomized controlled trial. Cancer. 2019 May 15;125(10):1683-1692. doi: 10.1002/cncr.31962. Epub 2019 Jan 11.
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Prophylactic lymph drainage

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Complementary Treatment While on Cancer Treatment – Impact on Toxicity I

During anti-cancer treatment: Beware of drug interactions

- **Mistletoe (*Viscum album*)**
in order to reduce side effects
- **Thymic peptides**
lower risk of severe infections
- **Ginseng**
in order to reduce cancer related fatigue; note: interacts with cytochrome P enzymes e.g. CYP 3A4
- **Ganoderma Lucidum**
may improve fatigue, note: inhibits cytochrome P enzymes (e.g. CYP 3A4)
- **L-Carnitine**
 - given for prevention of toxicity; however, increased chemotherapy-induced peripheral neuropathy
 - Improvement of cancer related fatigue
- **Curcumin**
adjunct to reduce radiation-induced dermatitis
- **Ginger**
adjunct to guideline-oriented medication to treat chemotherapy induced nausea & vomiting – beware of drug interactions

Oxford		
LoE	GR	AGO
1a	B	+/-
2a	B	+/-
2b	C	-
2b	C	-
1b	B	--
1b	B	-
1b	B	+/-
1b	C	+/-

General

- Li Y, Wang J, Lin F: A Methodology for Cancer Therapeutics by Systems Pharmacology-Based Analysis: A Case Study on Breast Cancer-Related Traditional Chinese Medicines. PLoS One. 2017 Jan 9;12(1):e0169363.
- Farahmand L, Darvishi B, Majidzadeh-A K: Naturally occurring compounds acting as potent anti-metastatic agents and their suppressing effects on Hedgehog and WNT/ β -catenin signalling pathways. Cell Prolif. 2017 Feb;50(1). doi: 10.1111/cpr.12299.
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Mistletoe

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Thymus

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Ginseng, Ganoderma lucidum

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L-Carnitine

1. Hershman DL, Unger JM, Crew K et al.: Randomized double-blind placebo-controlled trial of acetyl-L-carnitine for the prevention of taxane-induced neuropathy in women undergoing adjuvant breast cancer therapy. J Clin Oncol. 2013 Jul 10;31(20):2627-33
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Curcumin

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2. Bandyopadhyay D: Farmer to pharmacist: Curcumin as an anti-invasive and antimetastatic agent for the treatment of cancer. Frontiers in chemistry 2014;2:113.

Ingwer

1. Thamlikitkul L, Srimuninnim. Efficacy of ginger for prophylaxis of chemotherapy-induced nausea and vomiting in breast cancer patients receiving adriamycin-cyclophosphamide regimen: a randomized, double-blind, placebo-controlled, crossover study. Support Care it V, Akewanlop C, et alCancer. 2017 Feb;25(2):459-464. doi: 10.1007/s00520-016-3423-8. Epub 2016 Oct 6.
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Complementary Treatment While on Cancer Treatment – Impact on Toxicity II

	Oxford		
	LoE	GR	AGO
▪ Antioxidant supplements	1b	B	-
▪ various antioxidative extracts to reduce anthracyclin-induced cardiotoxicity	2b	B	+/-
▪ High dose vitamine C	1b	C	-
▪ Vitamine E	2b	D	-
▪ Selenium for alleviating therapy side effects	1b	B	-
▪ Co-Enzyme Q 10 (fatigue, QoL)	1b	B	-
▪ Proteolytic enzymes for reduction of chemotherapy-induced toxicity	3b	B	-
▪ Chinese herbal medicine improves wound healing	1b	B	-*inf
▪ Oxygen and ozone therapy	5	D	--
▪ Short-term fasting (QoL, Fatigue)	3b	C	+/-*

inf: i.v.-infusion (in Germany not approved)
 * treatment in clinical trials recommended

General

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Antioxidant supplements

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Vitamin C

1. Heaney M, Gardner J, Karasavvas N et al.: Vitamin C antagonizes the cytotoxic effects of antineoplastic drugs. Cancer Res. 2008 Oct 1;68(19):8031-8.
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Selen

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Coenzym Q10

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Proteolytic enzymes and toxicity of chemotherapy

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Bromelain

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Chinese herbal medicine and wound healing

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Kurzzeit-Fasten

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Additional Complementary Therapy of Side Effects Related to Cancer Treatments

	Oxford		
	LoE	GR	AGO
▪ Chinese medicinal herbs to treat the chemotherapy side effects in breast cancer patients	1b	B	-
▪ Homoeopathic medicine against therapy side effects	1b	B	+/-
▪ Topical Silymarin for prophylaxis of acute dermatitis during radiotherapy	3a	B	+/-
▪ Massage to improve on fatigue, pain, anxiety, nausea	1b	C	+/-
▪ Transcutaneous Electrical Nerve stimulation (TENS) against cancer pain	2b	D	+/-
▪ Hydrotherapy	3b	C	+/-

Chinese medicinal herbs

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Homeopathic medicines for adverse effects of cancer treatments

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Topical use of Silymarin

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Massage

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Transcutaneous electric nerve stimulation (TENS) for cancer pain in adults: (von Slide 16 übertragen)

1. Hurlow A, Bennett MI, Robb KA, et al. Transcutaneous electric nerve stimulation (TENS) for cancer pain in adults. Cochrane Database of Systematic Reviews 2012, Issue 3. Art. No.: CD006276. DOI: 10.1002/14651858.CD006276.pub3.
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Hydrotherapie

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Additional Complementary Therapy of Side Effects Related to Cancer Treatments

	Oxford		
	LoE	GR	AGO
Acupuncture in order to improve on			
▪ Chemotherapy-induced nausea and vomiting			
▪ (Electro)-Acupuncture as adjunct to antiemetic treatment	1b	B	+
▪ Acupressure as adjunct to antiemetic treatment	1b	B	+
▪ Pain			
▪ Cancer pain	1b	B	+
▪ Aromatase-inhibitor – induced arthralgia	1a	B	+
▪ TENS – Transcutaneous Electrical Nerve Stimulation to relieve cancer pain	2b	D	+/-
▪ Fatigue			
▪ Acupressure	1a	B	+
▪ Acupuncture	1b	B	+
▪ Anxiety and depression	2b	B	+
▪ Cognitive dysfunction	5	D	+/-
▪ Menopause syndrome in Breast Cancer Patients	1b	B	+
▪ to improve on frequency and severity of hot flashes	1b	B	+/-
▪ Electro-Acupuncture to improve on sleep and hot flashes	2a	B	+
▪ Leucopenia (Moxibustion)	2b	B	+/-
▪ Treatment of chemotherapy induced polyneuropathy			
▪ prophylactic	1b	B	-
▪ therapeutic	2b	B	+/-
▪ Chronic lymph edema after Breast Cancer Treatment	2b	B	+/-

Acupuncture

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Chemotherapy induced peripheral neuropathy

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Angst und Depression

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Complementary Treatment Mind-Body Medicine I

MBSR (Mindfulness-Based Stress Reduction)

Program improves quality of life, coping strategies, attentiveness, and lowers stress, anxiety, depression, fatigue, and sleep disturbances

Oxford		
LoE	GR	AGO
1a	A	+
1a	A	++

Physical exercise / sport

min. 3x/week moderate endurance training in combination with workout exercises (2x per week) improve quality of life, cardio-respiratory fitness, physical performance, sleep, pain, depression, lymphedema, and fatigue

Mind-Body Medicine (MBM)

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Complementary Treatment Mind-Body Medicine II

	Oxford LoE	GR	AGO
Relaxation techniques	2b	C	+/-
Reduction of anxiety and nausea, improvement of quality of life, reduction of psychological stress			
Yoga			
Improves sleep, quality of life, stress, anxiety, depression, fatigue, and sleep	1b	A	+
Qi Gong			
May improve quality of life, fatigue, and mood	2a	B	+/-
Tai Chi			
Improves quality of life, muscular strength, sleep	2a	B	+/-
Hypnosis (in combination with cognitive training)			
Improves fatigue and muscle weakness under radiotherapy; also reduces distress	1b	A	+

General

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	Oxford		
	LoE	GR	AGO
<ul style="list-style-type: none"> Physical exercise (equivalent to 3–5 hrs moderate walking per week) improves DFS and OS, cardio-respiratory fitness, physical functioning 	2a	A	++
<ul style="list-style-type: none"> Reduce Smoking 	2b	A	+
<ul style="list-style-type: none"> Reduce Alcohol consumption (< 6 g/day) 	2b	A	+

Physical exercise

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Alcohol

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Modifiable Lifestyle Factors

Nutrition after Breast Cancer Diagnosis

Prevention of Recurrence / Improvement of Overall Survival II

	Oxford		
	LoE	GR	AGO
■ Adherence to normal BMI / weight loss if overweight, irrespective of HR-status	1a	A	++
■ Low fat diet dietary counseling recommended	1a	B	+
■ Increased fiber intake (e.g. Flaxseed)	2a	B	+
■ Adherence to general nutrition guidelines (e.g. DGE, WCRF) similar to a Mediterranean Diet	2a	B	++
■ Dietary extremes	2a	B	--

Adherence to normal body weight/BMI

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Low-Fat Diet

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3. Dieli-Conwright CM, Lee K, Kiwata JL: Reducing the Risk of Breast Cancer Recurrence: an Evaluation of the Effects and Mechanisms of Diet and Exercise. Curr Breast Cancer Rep. 2016;8(3):139-150.
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Diät Extreme:

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Complementary Treatment

Prevention of Recurrence / Improvement of Overall Survival III

Dietary Supplements – Herbal Therapies

	LoE	Oxford	GR	AGO
Post treatment vitamin/antioxidant supplements does not appear to be associated with increased risk of recurrence (beware of drug/treatment interactions)	2b		B	
Smokers on antioxidant supplements are at higher risk for lung cancer	1b		A	
For Prevention of BC Recurrence:				
▪ Antioxidants	2a		B	+/-
▪ Vitamine supplementation in patients on a balanced diet (esp. Vit C, E, D)	2a		B	+/-
▪ Soy-food (natural source of phytoestrogens)	2a		B	+/-
– food or concentrates containing ≥ 100 mg) Isoflavones per day	2a		B	-
▪ Black Cohosh (Cimicifuga racemosa)	3b		C	+/-
▪ Antioxidant supplements (after completion of radiotherapy)	2b		B	+/-
▪ Green tea	3a		C	+/-
▪ Orthomolecular substances (Selenium, Zinc...)	5		D	-
▪ Artificial carotenoids appear to be associated with worse outcome	2b		B	-
▪ Proteolytic enzymes (Papain, Trypsin, Chymotrypsin)	3b		B	-
▪ Mistletoe (Viscum album)	1b		C	-
▪ Thymic peptides (impact on OS)	2a		B	-
▪ Oxygen- and ozone therapy	5		D	--
▪ Laetrile	1c		D	--
▪ Methadone	5		D	--
▪ Cancer bush (Sutherlandia frutescens), Devil's claw (Harpagophytum procumbens), Rooibos tea (Aspalathus linearis), Bambara groundnut (Vigna subterranean)	5		D	-
▪ Incense	5		D	-

General

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Black cohosh

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