

Krebs verstehen, vorbeugen und naturheilkundlich behandeln

Präsentiert von:
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Biochemiker, Mykotherapeut



Wir alle haben Krebs

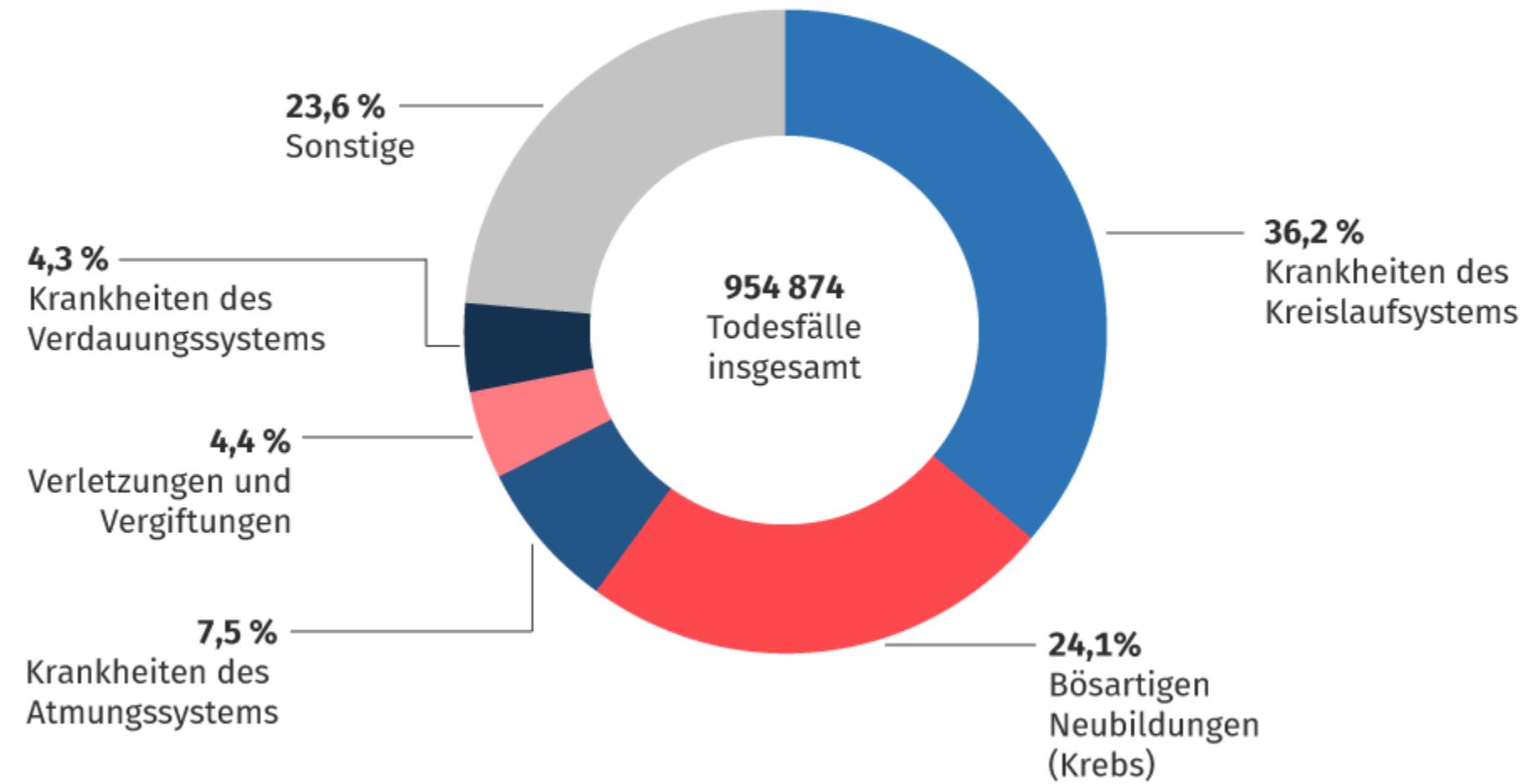
Täglich entstehen ca. 20 Tumorzellen im Körper ...

Organe	Bei der Autopsie diagnostizierte Tumoren (%)	Klinisch diagnostizierte Tumoren
Brust (Frauen, 40-50)	33	1
Prostata (Männer, 40-50)	40	2
Schilddrüse	98	0,1

Autopsie-Studien mit "Cenennarians" zeigen, dass nahezu jeder Miko-Tumore in sich trägt, diese aber nicht ausbrechen

Krebs ist die zweithäufigste Todesursache

Todesursachen nach Krankheitsarten 2018
in %



© Statistisches Bundesamt (Destatis), 2020

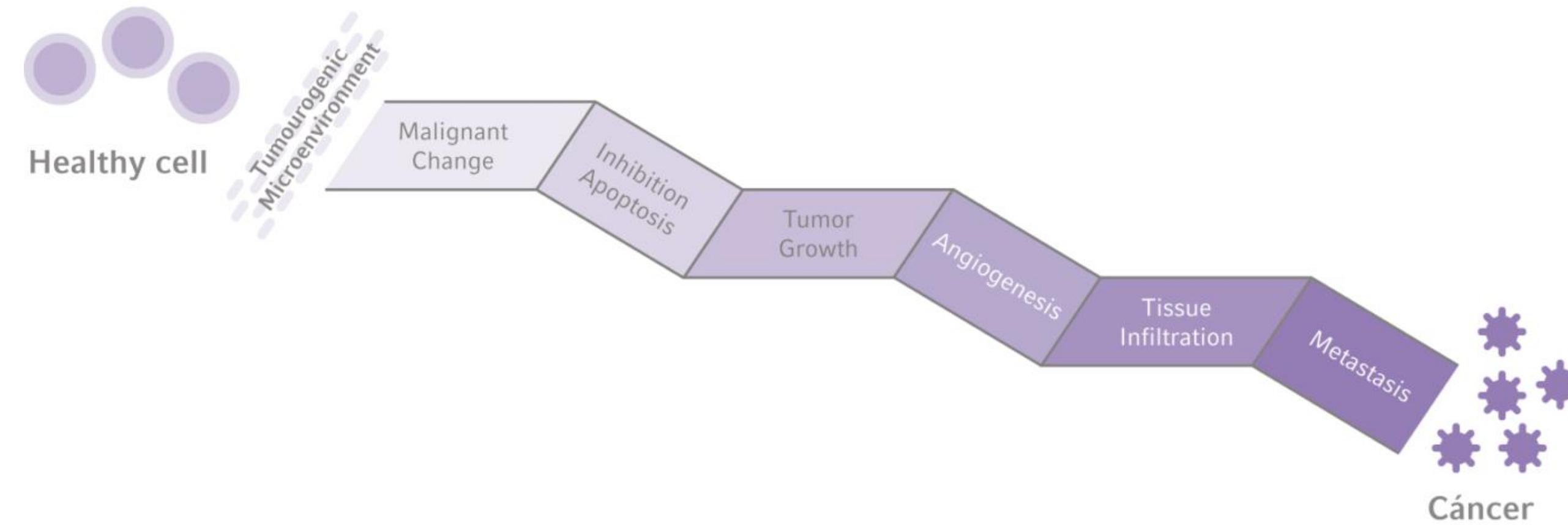
Betroffenes Gewebe

ICD-10 Positionsnummer	Bösartige Neubildung	Gestorbene ¹	Anteil in %
C34	der Bronchien und der Lunge (Lungen- und Bronchialkrebs)	44 853	19,5
C50	der Brustdrüse (Brustdrüsengeschwülste (Mamma))	18 786	8,2
C25	des Pankreas (Bauchspeicheldrüsenkrebs)	18 332	8,0
C18	des Kolons (Dickdarmkrebs)	15 948	6,9
C61	der Prostata	14 963	6,5
C80	ohne Angabe der Lokalisation	10 886	4,7
C16	des Magens	8 861	3,9
C22	der Leber und der intrahepatischen Gallengänge	7 990	3,5
C20	des Rektums (Mastdarm oder Enddarm)	7 700	3,3
C71	des Gehirns	5 981	2,6

1: Ohne Totgeborene und ohne gerichtliche Todeserklärungen.

Die Tabelle zum Thema "[Sterbefälle insgesamt nach den 10 häufigsten Todesursachen der ICD-10](#)" mit weiteren Informationen findet sich auch im Informationssystem der [Gesundheitsberichterstattung](#).

Krebs: Entstehung



Hallmarks of Cancer:

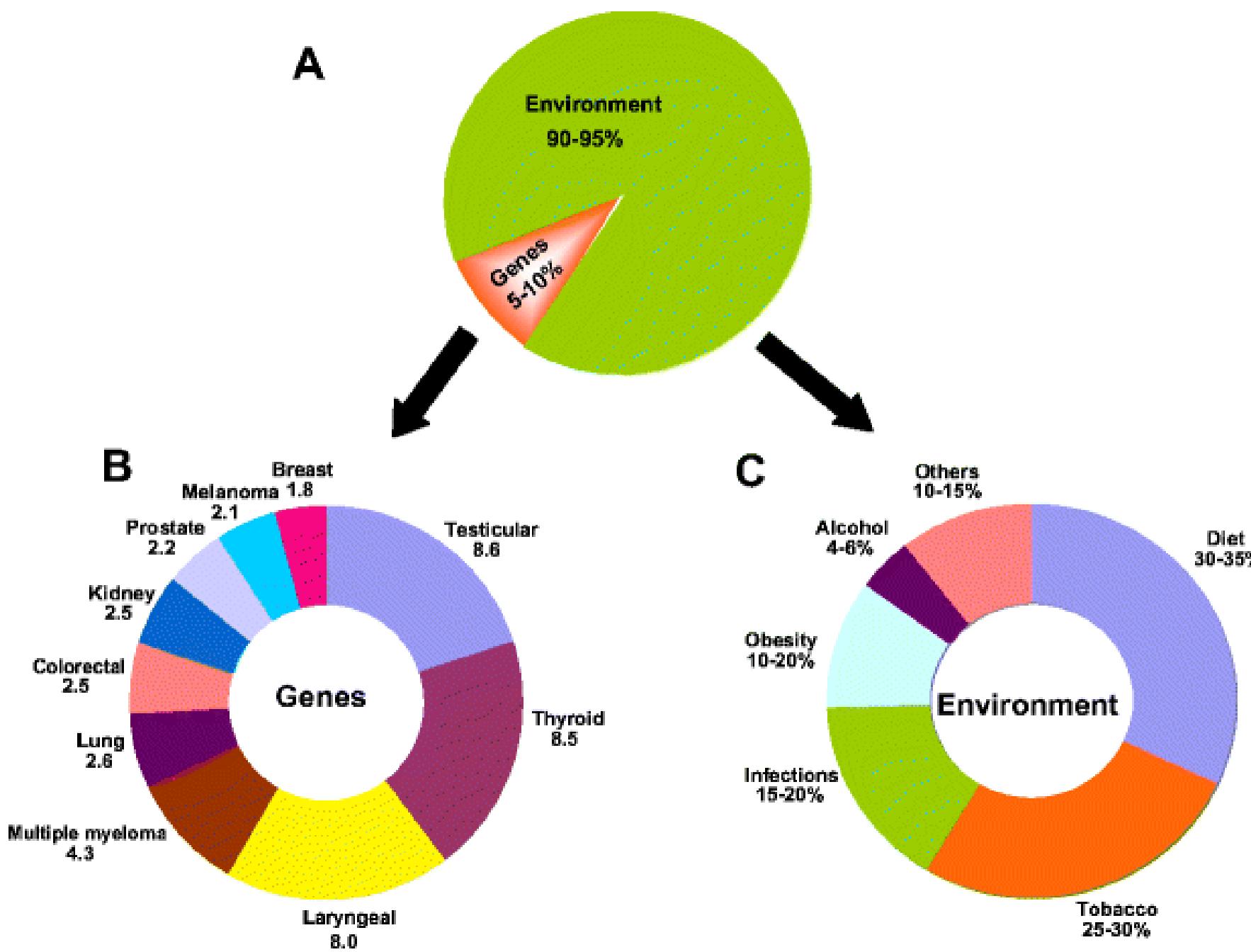
- Mutationen
- Abschalten von DNA-Reparatur-Programmen
- Abschalten des Zellselbstmords
- Unsterblichkeit
- Stetes Wachstum
- Ignorieren von Wachstums-Hemmern
- Änderung des Stoffwechsels
- Immun-Evasion
- Angiogenese
- Gewebeinfiltrierung
- Metastasierung

IST KREBS VERMEIDBAR?

„Wenn auf der Grundlage geografischer Vergleiche geeignete "vermeidbare Zahlen" für jede andere Krebsart als Hautkrebs angegeben werden, führt dies, wenn diese Schätzungen addiert werden, zu dem Vorschlag, dass in den USA heute etwa 75-80% der Neoplasien vermeidbar sein könnten. Der vermeidbare Gesamtprozentsatz könnte vermutlich sogar noch größer sein, [...]“

Übersetzt aus: Peto, R. (1981): „The causes of cancer – quantitative estimates of avoidable risks of cancer in the united states today“

Krebs: Genetik vs. Epigenetik



DOI: 10.1007/s11095-008-9661-9

Ziele bei der Krebsprävention

MUTAGENESE BREMSEN

Inhibierung der Mutationen
durch Vermeidung von
oxidativem Stress und
chronischen Entzündungen

1

IMMUNSYSTEM STÄRKEN

Kanzeröse und prä-kanzeröse
Zellen müssen durch das
Immunsystem erkannt und
beseitigt werden

2

ANGIOGENESE HEMMEN

Neubildung von Blutgefäßen
für den Tumor –
entscheidender Schritt, bei
dem ein Tumor erst richtig
gefährlich wird

3

EINFLUSS VON SCHADSTOFFEN MINIMIEREN

Weniger Kontakt mit
Schadstoffen, verbesserte
Entgiftungsfähigkeit

4

10 Tipps zur Krebs-Prävention

Was jeder Mensch für gesunde Krebsprävention tun kann

1. Nicht rauchen
2. Fit halten
3. Alkoholkonsum einschränken
4. Vorsicht mit der Sonne
5. Salzkonsum einschränken
6. Gesunde Ernährung
7. Übergewicht reduzieren
8. Rotes (verarbeitetes) Fleisch einschränken
9. Viel Obst, Gemüse, Beeren, Pilze, Kräuter, Gewürze
10. Nahrung sinnvoll ergänzen

Sport: -20-50 %

Mediterran: -70-80 %

Kein Wurst % Fastfood: -20 %

Beeren: - 41 %

Knoblauch: - 40 %

Grüntee: - 50 %

Grüntee + Pilze: - 89 %

Strategien zur Krebs-Prävention: Sport

We recently demonstrated that voluntary exercise leads to an influx of immune cells in tumors, and a more than 60% reduction in tumor incidence and growth across several mouse models.

DOI: 10.1007/s00262-017-1985-z

Relative risk reductions ranged from approximately 10% to 20%. Based on 18 systematic reviews and meta-analyses, the report also found moderate or limited associations between greater amounts of physical activity and decreased all-cause and cancer-specific mortality in individuals with a diagnosis of breast, colorectal, or prostate cancer, with relative risk reductions ranging almost up to 40% to 50%.

DOI: 10.1249/MSS.0000000000001937

Strategien zur Krebs-Prävention: Ernährung

Cancer Risk Among Women at High Cardiovascular Risk in the PREDIMED Trial

doi:10.1001/jamainternmed.2015.4838

Interventions Participants were randomly allocated to a **Mediterranean diet supplemented with extra-virgin olive oil, a Mediterranean diet supplemented with mixed nuts, or a control diet (advice to reduce dietary fat)**.

Main Outcomes and Measures Breast cancer incidence was a prespecified secondary outcome of the trial for women without a prior history of breast cancer ($n = 4152$).

Results After a median follow-up of 4.8 years, we identified 35 confirmed incident cases of breast cancer. **Observed rates (per 1000 person-years) were 1.1 for the Mediterranean diet with extra-virgin olive oil group, 1.8 for the Mediterranean diet with nuts group, and 2.9 for the control group.** The multivariable-adjusted hazard ratios vs the control group were 0.31 (95% CI, 0.13-0.77) for the **Mediterranean diet with extra-virgin olive oil group and 0.53 (95% CI, 0.23-1.26) for the Mediterranean diet with nuts group.** In analyses with yearly cumulative updated dietary exposures, the hazard ratio for each additional 5% of calories from extra-virgin olive oil was 0.72 (95% CI, 0.57-0.90).

Strategien zur Krebs-Prävention: Weniger Fleisch?

Meat consumption and mortality - results from the European Prospective Investigation into Cancer and Nutrition

<https://doi.org/10.1186/1741-7015-11-63>

Results

As of June 2009, 26,344 deaths were observed. After multivariate adjustment, **a high consumption of red meat was related to higher all-cause mortality (hazard ratio (HR) = 1.14, 95% confidence interval (CI) 1.01 to 1.28, 160+ versus 10 to 19.9 g/day), and the association was stronger for processed meat (HR = 1.44, 95% CI 1.24 to 1.66, 160+ versus 10 to 19.9 g/day). After correction for measurement error, higher all-cause mortality remained significant only for processed meat (HR = 1.18, 95% CI 1.11 to 1.25, per 50 g/d).** We estimated that 3.3% (95% CI 1.5% to 5.0%) of deaths could be prevented if all participants had a processed meat consumption of less than 20 g/day. Significant associations with processed meat intake were observed for cardiovascular diseases, cancer, and 'other causes of death'. The consumption of poultry was not related to all-cause mortality.

Strategien zur Krebs-Prävention: Grüntee

- 5+ Tassen Grüntee täglich halbieren das Risiko für Prostatakrebs bei Männern
(DOI 10.1093/aje/kwm249)
- 1-2 Tassen Grüntee täglich halbieren das Risiko für Brustkrebs bei Frauen
(DOI 10.1093/carcin/bgl252)

Strategien zur Krebs-Prävention: Soja?

Results

„Overall, the data are not impressive that the adult consumption of soy affects the risk of developing breast cancer or that soy consumption affects the survival of breast cancer patients. Consequently, if breast cancer patients enjoy soy products, it seems reasonable for them to continue to use them.“

DOI: 10.1093/jn/131.11.3095S

→ Entscheidend, ob traditionell zubereitetes Soja (fermentiert) oder nicht, da dadurch Abbau von Reizstoffen und Erhöhung der Bioaktivität der Isoflavone

Strategien zur Krebs-Prävention

Beeren:

The multivariate relative risk (RR) for every 2 servings/week consumption for total berries was 0.82 (95 % CI = 0.71–0.96, p = 0.01), and the **RR for women who consumed at least one serving of blueberries a week was 0.69** (95 % CI = 0.50–0.95, p = 0.02) compared with non-consumers. Also, the **RR for consuming at least 2 servings of peaches/nectarines per week was 0.59** (95 % CI = 0.37–0.93, p = 0.02)

DOI: <https://doi.org/10.1007/s10549-013-2484-3>

Knoblauch und andere Zwiebelgewächse:

The random-effects relative risk (RR) estimate of colorectal cancer and RC garlic consumption, excluding garlic supplements, was 0.69 (95% CI: 0.55, 0.89). For stomach cancer, the random-effects RR estimate was 0.53 (95% CI: 0.31, 0.92)

DOI: <https://doi.org/10.1093/ajcn/72.4.1047>

Strategien zur Krebs-Prävention: Pilze

Dietary intakes of mushrooms and green tea combine to reduce the risk of breast cancer in Chinese women

DOI: 10.1002/ijc.24047

Abstract

[...] The incident cases were 1,009 female patients aged 20-87 years with histologically confirmed breast cancer. The 1,009 age-matched controls were healthy women randomly recruited from outpatient breast clinics. Information on frequency and quantity of dietary intake of mushrooms and tea consumption, usual diet, and lifestyle were collected by face-to-face interview using a validated and reliable questionnaire. Compared with nonconsumers, the Odds ratios (Ors) were 0.36 (95% CI = 0.25-0.51) and 0.53 (0.38-0.73) for daily intake of >or=10 g fresh mushrooms and >or=4 g dried mushrooms, based on multivariate logistic regression analysis adjusting for established and potential confounders. There were dose-response relationships with significant tests for trend ($p < 0.001$). The inverse association was found in both pre- and postmenopausal women. Compared with those who consumed neither mushrooms nor green tea, the ORs were 0.11 (0.06-0.20) and 0.18 (0.11-0.29) for daily high intake of fresh and dried mushrooms combined with consuming beverages made from >or=1.05 g dried green tea leaves per day. [...]

Strategien zur Krebs-Prävention

Nahrungsmittel	Anzahl der Teilnehmer	Krebsart	Risikoreduktion (%)
Gemüse der Kreuzblüten-gewächse	47 909	Blase	50 %
	4309	Lunge	30 %
	29 361	Prostata	50 %
Tomaten	47 365	Prostata	25 %
Zitrusfrüchte	521 457	Magen Speiseröhre	25 %
	477 312	Magen	39 %
Grünes Gemüse (Folsäure)	81 922	Bauchspeicheldrüse	75 %
	11 699	Brust (Post-Menopause)	44 %
Grünes Gemüse	31 000	Brust	30 %
Lignane	58 049	Brust (Post-Menopause ER+)	28 %
Karotten	490 802	Kopf und Hals	46 %
Äpfel, Birnen, Pflaumen	490 802	Kopf und Hals	38 %
Grüner Tee	69 710	Kolorektal	57 %
Pflanzenöle und Nüsse (Tocopherol)	295 344	Prostata	32 %
Vitamin D/Kalzium	10 578	Brust (Post-Menopause)	35 %
Blaubeeren	75 929	Brust (ER-)	31 %
Nüsse	75 680	Bauchspeicheldrüse	35 %

Krebs: Behandlung

... Operation, Radiotherapie, Chemotherapie ...

Chemotherapie Allgemein:

- Manchmal Primärtherapie, manchmal Adjuvans
- Bei manchen Krebsarten hoch effektiv (z.B. Lymphome, Leukämie, Neuroblastome, Hodenkrebs ... bei anderen Krebsarten weniger)
- **Problem 1:** Viele Zytostatika sind selbst kanzerogen
- **Problem 2:** Immunsystem und Darmflora werden massiv geschwächt
- **Problem 3:** Nebenwirkungen bei Großteil der Patienten - Übelkeit und Erbrechen, Erschöpfung, Haarausfall, Geschmacksstörungen, Schleimhautentzündungen, Herzschäden, Neutropenie, Leukopenie, Darmschwäche, Anämie



Differentialdiagnostik

ZIEL: PERSONALISIERTE MEDIZIN

1. Maintrac

Zirkulierende Tumorzellen werden auf ihre Empfänglichkeit hinsichtlich Chemotherapeutika untersucht

2. RGCC

Tumorsequenzierung und Chemotherapeutika-Sensitivitätstest



Was muss Komplementärmedizin leisten?

ANSPRECHEN ERHÖHEN

Nicht jeder Patient spricht auf die Chemotherapie an – dies kann unterstützt werden

1

ÜBERLEBENS- RATE ERHÖHEN

2

NEBENWIRKUNGEN REDUZIEREN

Großteil aller Patienten erfährt stark einschränkende und belastende Nebenwirkungen

3

IMMUNSYSTEM & DARM ERHALTEN

Verdauungstätigkeit und Immunkompetenz aufrecht erhalten

4

Misteltherapie – Der Klassiker?

Mistletoe therapy in oncology

<https://doi.org/10.1007/s00432-018-02837-4>

Results

The search strategy identified 3647 hits and 28 publications with 2639 patients were finally included in this review. Mistletoe was used in bladder cancer, breast cancer, other gynecological cancers (cervical cancer, corpus uteri cancer, and ovarian cancer), colorectal cancer, other gastrointestinal cancer (gastric cancer and pancreatic cancer), glioma, head and neck cancer, lung cancer, melanoma and osteosarcoma. In nearly all studies, mistletoe was added to a conventional therapy. Patient relevant endpoints were overall survival (14 studies, $n= 1054$), progression- or disease-free survival or tumor response (10 studies, $n= 1091$). Most studies did not show any effect of mistletoe on survival. Especially high quality studies do not show any benefit.

Conclusions

With respect to survival, a thorough review of the literature does not provide any indication to prescribe mistletoe to patients with cancer.

Mikrobiom

Microbiota: a key orchestrator of cancer therapy

<https://doi.org/10.1038/nrc.2017.13>

Die Mikrobiota reguliert das Ansprechen auf verschiedene Arten der Krebschemotherapie, indem sie deren Wirkmechanismus und Toxizität beeinflusst. Die am besten charakterisierten sind Oxaliplatin und Cyclophosphamid; Die Antikrebsaktivität wird durch die Darmmikrobiota beeinflusst, die myeloide Zellen für die Produktion reaktiver Sauerstoffspezies im Fall von Oxaliplatin vorbereitet und die Induktion einer Antikrebs-T-Zell-Antwort im Fall von CTX erleichtert.

Die Rolle der Mikrobiota bei der Modulation des Ansprechens auf eine Strahlentherapie gegen Krebs muss noch vollständig charakterisiert werden. Es wurde jedoch beschrieben, dass keimfreie Mäuse weniger anfällig für Strahlungstoxizität sind als herkömmlich gezüchtete Mäuse, und Hinweise bei Menschen und Versuchstieren legen nahe, dass die Zusammensetzung der Darmmikrobiota die Schwere der strahleninduzierten Schleimhauttoxizität beeinflussen kann.

Fettlösliche Vitamine

Effect of High-Dose vs Standard-Dose Vitamin D3 Supplementation on Progression-Free Survival Among Patients With Advanced or Metastatic Colorectal Cancer

doi:10.1001/jama.2019.2402

Findings In this phase 2 randomized clinical trial that included 139 patients with advanced or metastatic colorectal cancer, treatment with chemotherapy plus high-dose vitamin D₃ supplementation vs chemotherapy plus standard-dose vitamin D₃ resulted in a median progression-free survival of 13 months vs 11 months, respectively, that was not statistically significant, but a multivariable hazard ratio of 0.64 for progression-free survival or death that was statistically significant.

Vitamin A als Nachbehandlung bei Chemotherapie:

The 6-year overall survival and cumulative incidence of relapse (CIR) rates were 78.1% versus 87.4% ($P = .001$) and 27.7% versus 10.7% ($P < .0001$). Significantly lower CIR rates for patients in the AIDA-2000 were most evident in the high-risk group (49.7% vs 9.3%, respectively, $P < .0001$).

<https://doi.org/10.1182/blood-2010-03-276196>

Melatonin

The efficacy and safety of melatonin in concurrent chemotherapy or radiotherapy for solid tumors: a meta-analysis of randomized controlled trials

<https://doi.org/10.1007/s00280-012-1828-8>

The search strategy identified 8 eligible RCTs ($n = 761$), all of which studied solid tumor cancers. The dosage of melatonin used in the 8 included RCTs was **20 mg orally, once a day**. Melatonin significantly improved the complete and partial remission (16.5 vs. 32.6%; RR = 1.95, 95% CI, 1.49–2.54; $P < 0.00001$) as well as 1-year survival rate (28.4 vs. 52.2%; RR = 1.90; 95% CI, 1.28–2.83; $P = 0.001$), and dramatically decreased radiochemotherapy-related side effects including thrombocytopenia (19.7 vs. 2.2%; RR = 0.13; 95% CI, 0.06–0.28; $P < 0.00001$), neurotoxicity (15.2 vs. 2.5%; RR = 0.19; 95% CI, 0.09–0.40; $P < 0.0001$), and fatigue (49.1 vs. 17.2%; RR = 0.37; 95% CI, 0.28–0.48; $P < 0.00001$). Effects were consistent across different types of cancer. No severe adverse events were reported.

Omega 3 Fettsäuren

Supplementation with fish oil increases first-line chemotherapy efficacy in patients with advanced nonsmall cell lung cancer

DOI: 10.1002/cncr.25933

However, the response rate to first-line chemotherapy in patients with nonsmall cell lung cancer (NSCLC) is less than 30%. [...].

Methods: Forty-six patients completed the study, n = 31 in the SOC group and n = 15 in the FO group (**2.5 g EPA + DHA/day**).

Results: Patients in the FO group had an increased response rate and greater clinical benefit compared with the SOC group (**60.0% vs 25.8%, P = .008**; **80.0% vs 41.9%, P = .02**, respectively). The incidence of dose-limiting toxicity did not differ between groups (P = .46). **One-year survival tended to be greater in the FO group (60.0% vs 38.7%; P = .15)**.

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Adjuvant immunochemotherapy with oral Tegafur/Uracil plus PSK in patients with stage II or III colorectal cancer: a randomised controlled study

DOI: 10.1038/sj.bjc.6601619

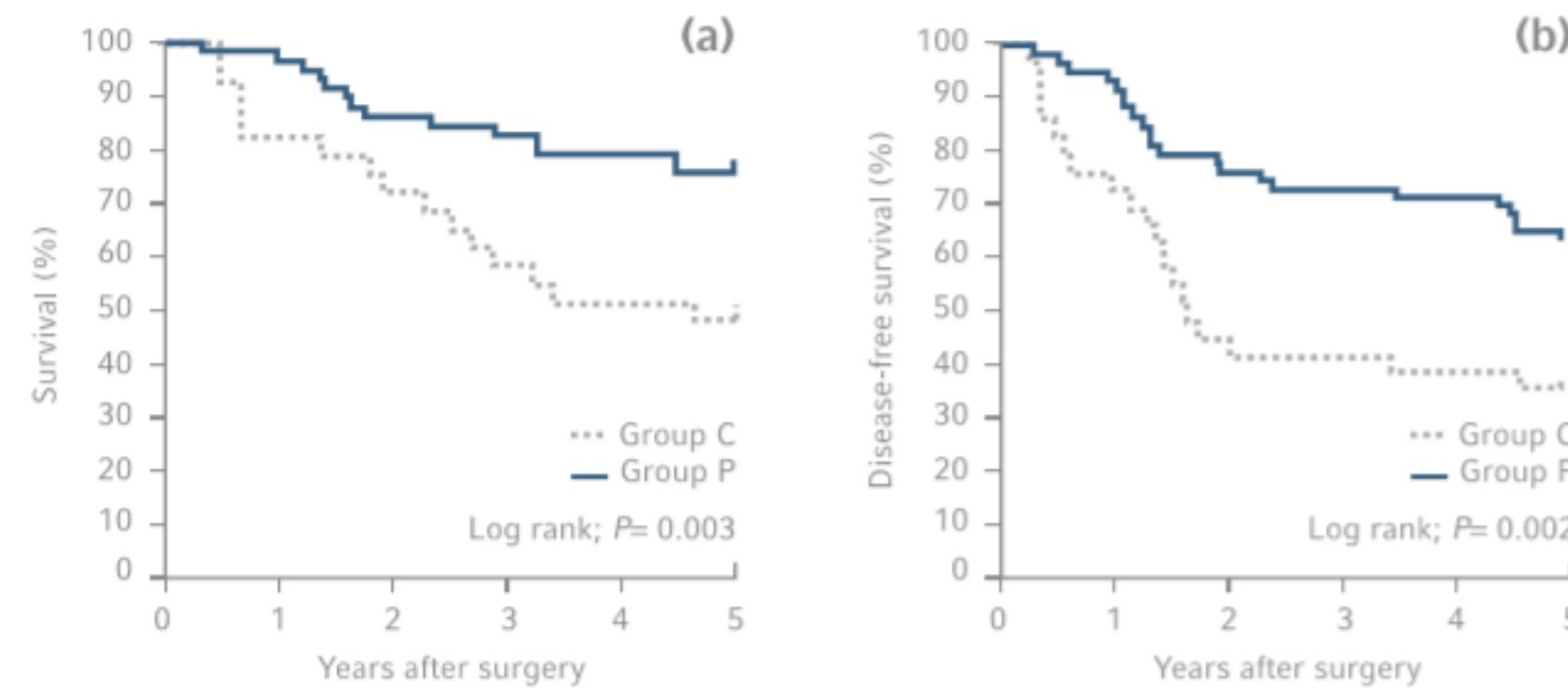


Abb. 1. (a) Gesamtüberlebenszeit und (b) krankheitsfreies Überleben bei Patienten mit Darmkrebs im Stadium III (---): Behandlung mit Tegafur/Uracil; (—) Behandlung mit PSK®, ein Polysaccharopeptid gewonnen aus *Coriolus versicolor*, in Zusammensetzung mit Tegafur/Uracil.¹

Lentinan

[Onco Targets Ther.](#) 2013 Jul 9;6:853-9. doi: 10.2147/OTT.S44169. Print 2013.

Evaluation of host quality of life and immune function in breast cancer patients treated with combination of adjuvant chemotherapy and oral administration of Lentinula edodes mycelia extract.

[Nagashima Y¹](#), [Maeda N](#), [Yamamoto S](#), [Yoshino S](#), [Oka M](#).

PATIENTS AND METHODS: The present study investigated the effectiveness of the concomitant use of *Lentinula edodes* mycelia extract (LEM), an oral immunomodulator, with FEC75 (5-fluorouracil + epirubicin + cyclophosphamide) therapy on host QOL and immune function in breast cancer patients with nodal metastases. Ten breast cancer patients with nodal metastases receiving surgery were enrolled in this study. Treatment with 5-fluorouracil (500 mg/m(2)), epirubicin (75 mg/m(2)), and cyclophosphamide (500 mg/m(2)) was performed every 21 days for two courses, and LEM (1800 mg/day by mouth) was administered during the second course.

RESULTS: In the first course, hematological toxicity was observed and host QOL and immune function were exacerbated. In the second course, however, the number of white blood cells and lymphocytes did not decrease and host QOL was maintained. Furthermore, the cytotoxic activities of natural killer (NK) and lymphokine-activated killer cells and the proportion of activated NK and NK T-cells in lymphocytes were maintained in the second course.

Was würde ich tun, wenn ich Krebs hätte?

1. Differentialdiagnostik – Chemotherapie und wenn ja, welche?
2. Mediterrane ketogene Ernährung
3. Intermittierendes Fasten
4. Bewegung
5. Fettlösliche Vitamine, bioverfügbar (Vitamin A, Vitamin D, Vitamin E)
6. Vitamin C
7. Täglich grünes Gemüse & Wildkräuter
8. Multivitaminpräparat
9. EGCG + Curcumin
10. Melatonin
11. Omega 3-Fettsäuren
12. Pilz-Extrakte, hoch dosiert



... ZUM POTENZIAL VON PILZEXTRAKTEN

Pilzextrakte vs. Medikamente



Fundación MEDINA
Centro de Excelencia en Investigación de
Medicamentos Innovadores en Andalucía

Assessment CYP450 Inhibition by Fungi Dietary Supplements

Introduction

Due in part to the increased consumption of herbal products on a global scale, a sharp rise in the reported number of both *in vitro* and *in vivo* interactions of dietary supplements with prescription drugs that are metabolized by cytochrome P450 (CYP) enzymes has been observed. Popular products such as ginseng, saw palmetto and St. John's wort have demonstrated potent *in vitro* inhibition or induction of CYP activity. While reports of *in vivo* interactions are not as numerous, natural products such as garlic, goldenseal and grapefruit juice have shown the potential to affect CYP activity *in vivo*. As the widespread use of herbal and alternative medicines continues, an increased awareness on the part of the research and medical communities should afford safer use of these products in the future.

Objective

The aim of this study was to evaluate the *in vitro* inhibitory potential of 8 different commonly used fungi preparations on the main CYP450 isoforms (CYP3A4, CYP2D6 and CYP2C9). These products: Coriolus versicolor, Ganoderma Lucidum, Lentinula Edodes, Grifola Frondosa, Agaricus Blaei, Cordyces Sinensis and Polyporus Umbellatus are all registered in Spain as dietary supplement products by the Spanish Medicine Agency.

Methods and Materials

Preparation of herbal extracts

The dry commercial herbal products (pills or capsules) were grounded in a mortar, if needed, and dissolved in water and DMSO 80/20 for extraction. The recommended daily dosage of each fungi preparation was taken as basis for all extractions¹ for further details. These *in vitro* concentrations are expected to cover the range of concentrations occurring in the small intestine and blood *in vivo*. All fungi stock solutions were kept at 4°C, avoiding light.

Enzyme assay

Human liver microsomes (0.25 mg/ml) were incubated in separate 96 well plates for 15 min. at 37°C in a 0.1 mM potassium phosphate buffer (pH 7.4) containing each respective probe substrate Testosterone at 50 µM for CYP3A4, dextromethorphan at 10 µM for CYP2D6, and diclofenac at 20 µM for CYP2C9) and

Summary of IC₅₀ values for fungi dietary supplements in main CYP450 Isoforms

Compound ID	IC ₅₀ , CYP3A4	IC ₅₀ , CYP2D6	IC ₅₀ , CYP2C9
Agaricus blaei	>1132 µg/ml	>1132 µg/ml	>1132 µg/ml
Cordyceps sinensis	>1470 µg/ml	>170 µg/ml	>1420 µg/ml
Coriolus versicolor	>1072 µg/ml	>1072 µg/ml	>1072 µg/ml
Ganoderma lucidum	>1004 µg/ml	>1004 µg/ml	>1004 µg/ml
Grifola frondosa	>884 µg/ml	>884 µg/ml	>884 µg/ml
Hericium erinaceum	>1047 µg/ml	>1052 µg/ml	>1052 µg/ml
Lentinula edodes	>2336 µg/ml	>2336 µg/ml	>2336 µg/ml
Polyporus umbellatus	>848 µg/ml	>848 µg/ml	>848 µg/ml
Ketoconazole (CYP3A4 control)	0.078 µM	N.A.	N.A.
Quinidine (CYP2D6 control)	N.A.	0.1 µM	N.A.
Sulfaphenazole (CYP2C9 control)	N.A.	N.A.	0.48 µM

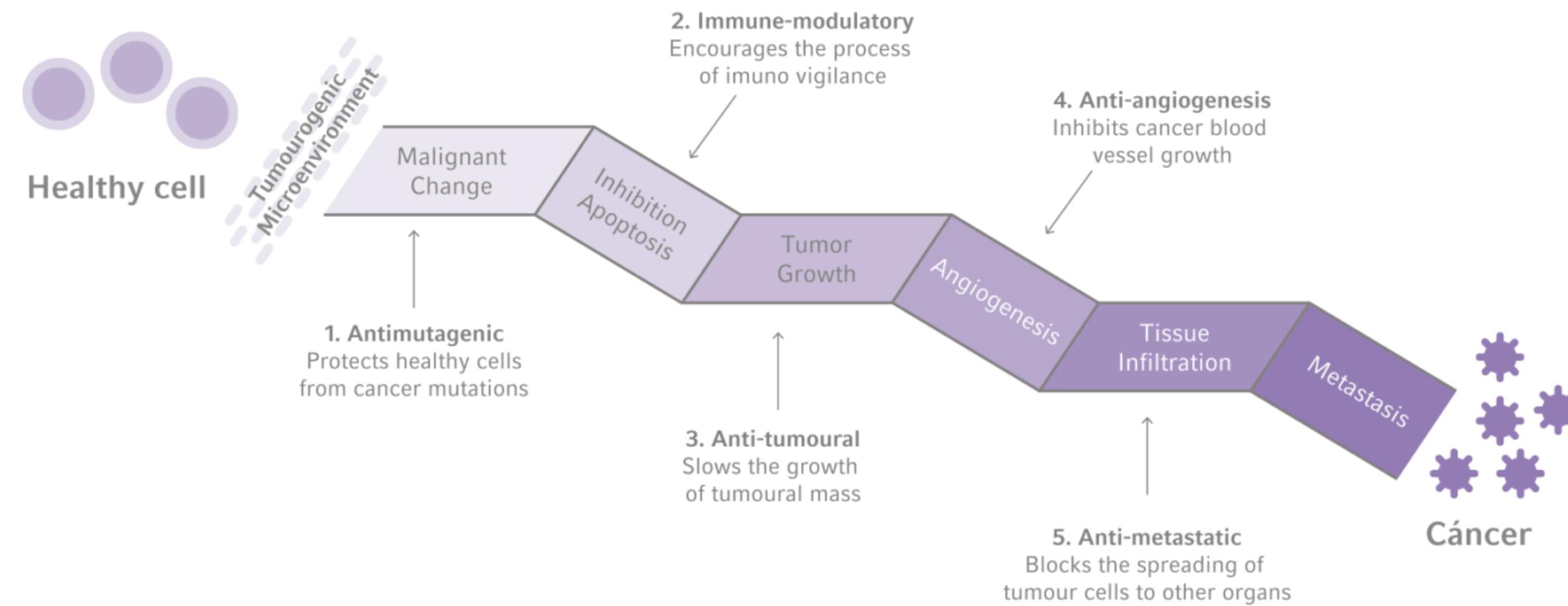
>> Keine Interaktion mit
Medikamenten, da andere
Cytochrome

Pilz-Extrakte: Auf einen Blick

1. ~ 40 % aller konventionell genutzten Medikamente stammen aus Pilzen (Antibiotika, Statine, Immunsuppressiva, Chemotherapeutika)
2. In China und Japan sind Extrakte aus Shiitake, Reishi und Schmetterlingstramete zur komplementären Krebstherapie zugelassen
3. Klinische Studien nach höchsten Standards bestätigen die Wirkung und Anwendung
4. Medizinische Pilze gehören zu den effektivsten Immunmodulatoren in der Natur

Pilze in der Komplementärtherapie

The effect of mushrooms on the Cancer Pathway



Reminder: Was muss Komplementärmedizin leisten?

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NEBENWIRKUNGEN REDUZIEREN

Großteil aller Patienten erfährt stark einschränkende und belastende Nebenwirkungen

3

IMMUNSYSTEM & DARM ERHALTEN

Verdauungstätigkeit und Immunkompetenz aufrecht erhalten

4

1. Ansprechrate erhöhen



Ganoderma lucidum (Reishi mushroom) for cancer treatment

doi: 10.1002/14651858.CD007731.pub3 (Cochrane Collaboration)

Abstract.

The methodological quality of primary studies was generally unsatisfying and the results were reported inadequately in many aspects. Additional information was not available from primary trialists. The meta-analysis results showed that patients who had been given G. lucidum alongside with chemo/radiotherapy **were more likely to respond positively compared to chemo/radiotherapy alone (RR 1.50; 95% CI 0.90 to 2.51, P = 0.02)**. G. lucidum treatment alone did not demonstrate the same regression rate as that seen in combined therapy. The results for host immune function indicators suggested that G. lucidum simultaneously increases the percentage of CD3, CD4 and CD8 by 3.91% (95% CI 1.92% to 5.90%, P < 0.01), 3.05% (95% CI 1.00% to 5.11%, P < 0.01) and 2.02% (95% CI 0.21% to 3.84%, P = 0.03), respectively. In addition, leukocyte, NK-cell activity and CD4/CD8 ratio were marginally elevated. [...]: **Our review did not find sufficient evidence to justify the use of G. lucidum as a first-line treatment for cancer**. It remains uncertain whether G. lucidum helps prolong long-term cancer survival. **However, G. lucidum could be administered as an alternative adjunct to conventional treatment in consideration of its potential of enhancing tumour response and stimulating host immunity**. G. lucidum was generally well tolerated by most participants with only a scattered number of minor adverse events. No major toxicity was observed across the studies.

1. Ansprechrate erhöhen



Lentinan as an immunotherapeutic for treating lung cancer: a review of 12 years clinical studies in China

DOI: 10.1007/s00432-018-2718-1

Abstract.

Results: The structure and function relationship and underlying molecular mechanism of lentinan as an immunostimulant has been summarized. The mean value of **overall response rate in treating lung cancer was increased from 43.3% of chemotherapy alone to 56.9% of lentinan plus chemotherapy** [$p < 0.001$, 95% confidence interval (CI) 0.102-0.170]. **Compared with chemotherapy alone, lentinan plus chemotherapy showed more efficacy in treating lung cancer** (pooled RR 0.79, 95% CI 0.74-0.85) and no statistical heterogeneity was found among studies ($I^2 = 11\%$)

2. Überlebensrate erhöhen



Adjuvant immunotherapy with oral Tegafur/Uracil plus PSK in patients with stage II or III colorectal cancer: a randomised controlled study

doi: 10.1038/sj.bjc.6601619.

Abstract.

Patients were assigned to groups following intravenous mitomycin free survival was 73.0% (95% CI 6

Polysaccharide K reduced the rec
was 81.8% (95% CI 75.3-88.2%) in
disease-free and overall survivals
63.0-86.1%) in the PSK group as c
0.003, respectively).

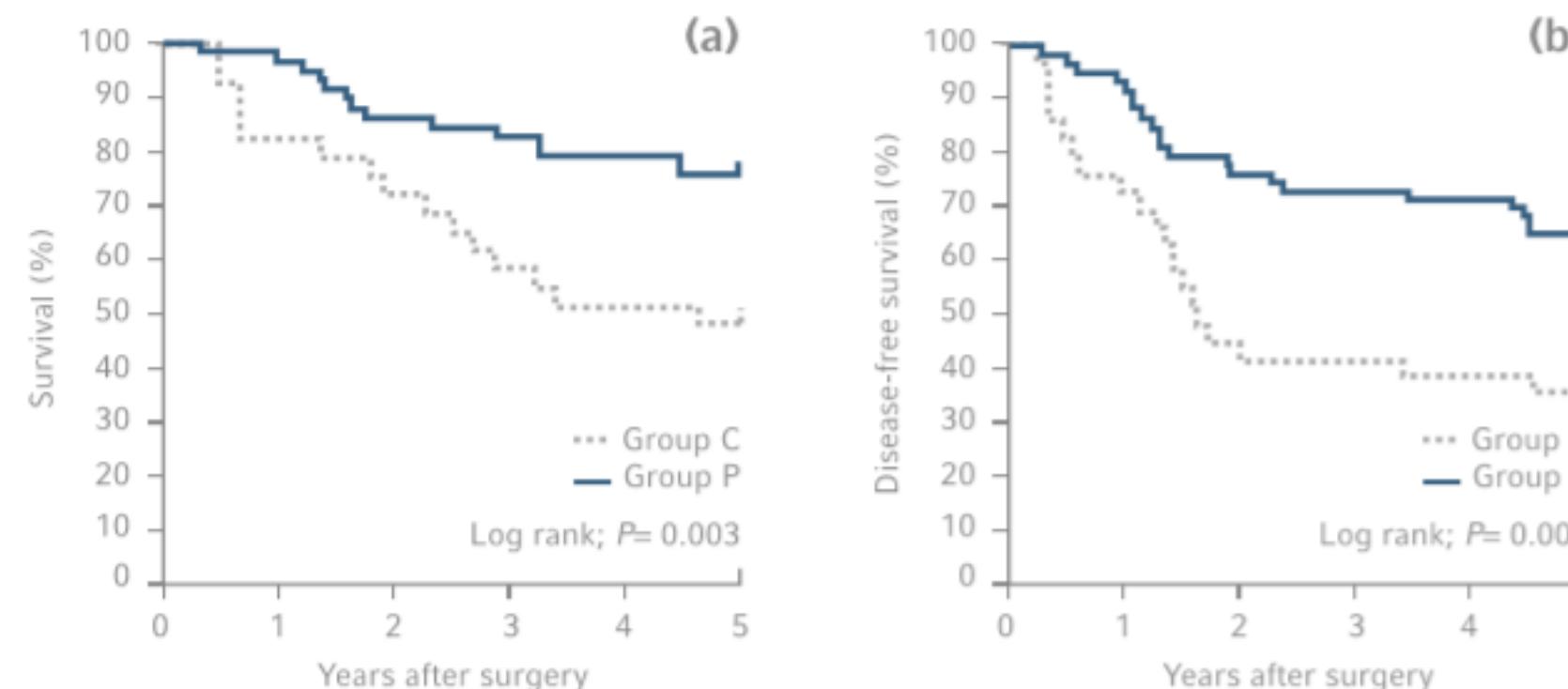


Abb. 1. (a) Gesamtüberlebenszeit und (b) krankheitsfreies Überleben bei Patienten mit Darmkrebs im Stadium III (---): Behandlung mit Tegafur/Uracil; (—) Behandlung mit PSK®, ein Polysaccharopeptid gewonnen aus *Coriolus versicolor*, in Zusammensetzung mit Tegafur/Uracil.¹

ily each day for a 2-year period
e analysed. The 5-year disease-
ols (n=68) (P=0.016).
2.5 to 68.3%). The 5-year survival
0.056). **In stage III patients,**
7.1-72.9%) and 74.6% (95% CI
5) in the controls (P=0.002 and

2. Überlebensrate erhöhen



Efficacy of postoperative UFT (Tegafur/Uracil) plus PSK therapies in elderly patients with resected colorectal cancer

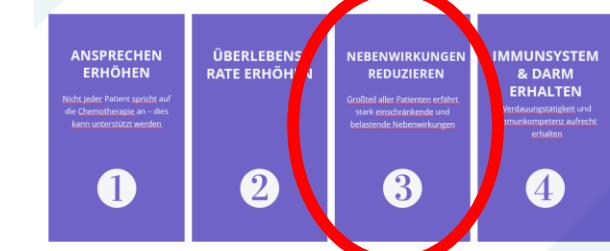
DOI: 10.1089/cbr.2008.0547

Abstract.

[...] A total of 63 patients were collected; 39 patients were administered only with UFT (control group) and 24 patients were treated with UFT+PSK (PSK group). There were no differences in patient background, surgical outcomes, and drug compliance between the two groups. **The 3-year relapse-free survival rate was 47.8% in the control group and 76.2% in the PSK group ($p = 0.041$). The 3-year overall survival (OS) rate was 52.8% in the control group and 80.8% in the PSK group ($p = 0.0498$).** By subset analysis, in the patients whose tumor location was the colon ($p = 0.016$) and whose preoperative lymphocyte percentage was below 18.7% ($p = 0.017$), RFS was significantly better in the PSK group. **Adverse drug reactions were rarely observed.** All the adverse reactions were grade 2 or below, with no severe reactions. The present retrospective study suggests a possible efficacy of postoperative adjuvant therapy with UFT plus PSK in elderly patients over 70 years of age with resected colorectal cancer.

3. Nebenwirkungen reduzieren

Reminder: Was muss Komplementärmedizin leisten?



Natural killer cell activity and quality of life were improved by consumption of a mushroom extract, Agaricus blazei Murill Kyowa, in gynecological cancer patients undergoing chemotherapy

doi: 10.1111/j.1048-891X.2004.14403.x

Abstract.

One hundred cervical, ovarian, and endometrial cancer patients were treated either with carboplatin (300 mg / m²) plus VP16 (etoposide, 100 mg / m²) or with carboplatin (300 mg / m²) plus taxol (175 mg / m²) every 3 weeks for at least three cycles with or without oral consumption of ABMK. We observed that natural killer cell activity was significantly higher in ABMK-treated group (ANOVA, n = 39, P < 0.002) as compared with nontreated placebo group (n = 61). However, no significant difference in lymphokine-activated killer and monocyte activities was observed in a manner similar to the count of specific immune cell populations between ABMK-treated and nontreated groups. **However, chemotherapy-associated side effects such as appetite, alopecia, emotional stability, and general weakness were all improved by ABMK treatment.**

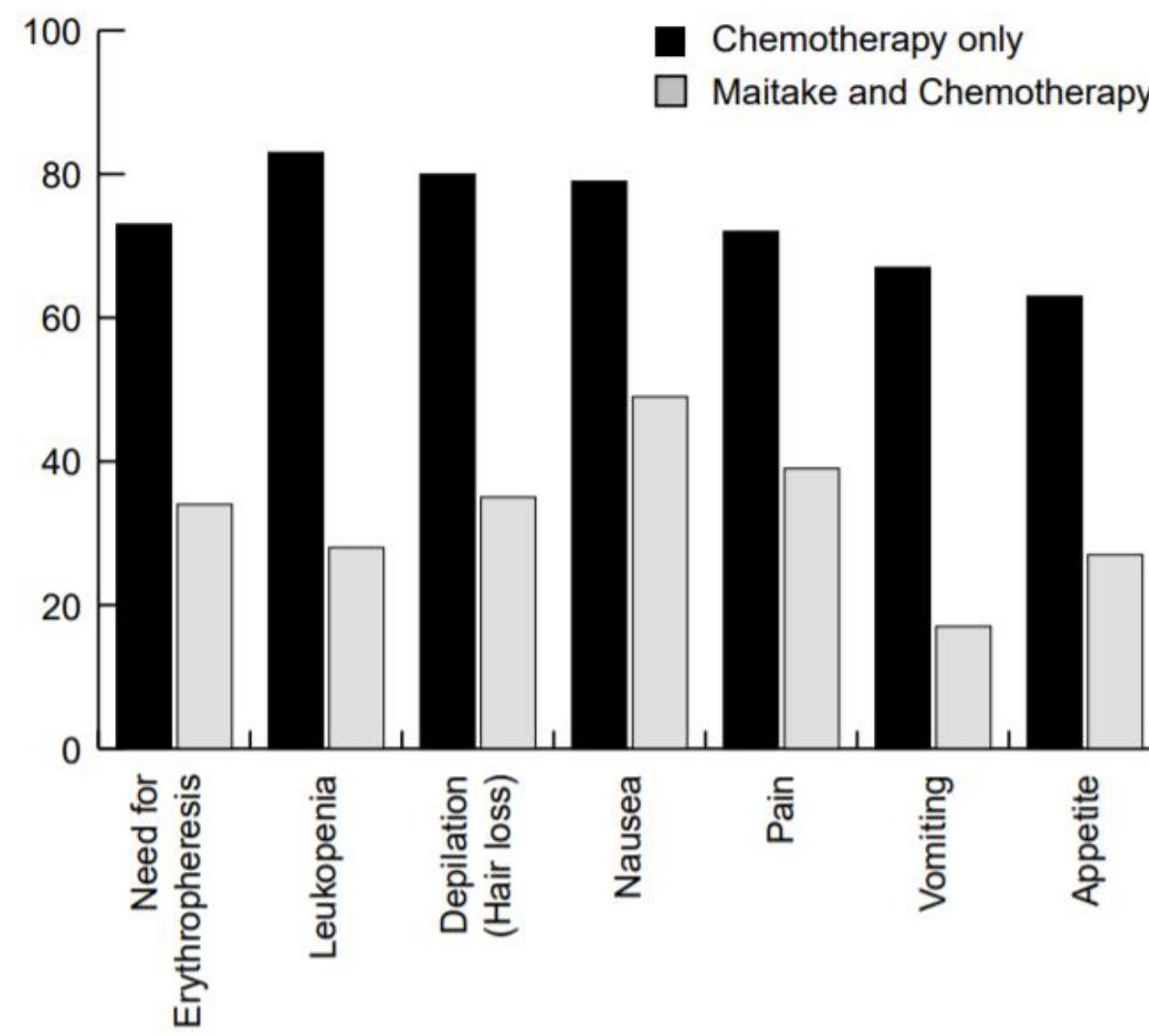
3. Nebenwirkungen reduzieren



Maitake extracts and their therapeutic potential

PMID: 11207456

Figure 2: Amelioration of Chemotherapeutic Side-Effects by D-Fraction (n=455).



4. Immunkompetenz erhalten



Evaluation of host quality of life and immune function in breast cancer patients treated with combination of adjuvant chemotherapy and oral administration of *Lentinula edodes* mycelia extract

doi: 10.2147/OTT.S44169

Patients and methods

The present study investigated the effectiveness of the concomitant use of *Lentinula edodes* mycelia extract (LEM), an oral immunomodulator, with FEC75 (5-fluorouracil + epirubicin + cyclophosphamide) therapy on host QOL and immune function in breast cancer patients with nodal metastases. Ten breast cancer patients with nodal metastases receiving surgery were enrolled in this study. Treatment with 5-fluorouracil (500 mg/m²), epirubicin (75 mg/m²), and cyclophosphamide (500 mg/m²) was performed every 21 days for two courses, and **LEM (1800 mg/day by mouth)** was administered during the second course.

Results

In the first course, hematological toxicity was observed and host QOL and immune function were exacerbated. In the second course, however, the number of white blood cells and lymphocytes did not decrease and host QOL was maintained. Furthermore, the cytotoxic activities of natural killer (NK) and lymphokine-activated killer cells and the proportion of activated NK and NK T-cells in lymphocytes were maintained in the second course.

4. Immunkompetenz erhalten



Lentinula edodes mycelia extract plus adjuvant chemotherapy for breast cancer patients: Results of a randomized study on host quality of life and immune function improvement

DOI 10.3892/mco.2017.1346

Patients and methods

A total of 47 breast cancer patients who were scheduled to receive postoperative adjuvant anthracycline-based chemotherapy, i.e., 5-fluorouracil (5-FU) + cyclophosphamide + epirubicin (FEC regimen), 5-FU + cyclophosphamide + doxorubicin/pirarubicin (FAC regimen), cyclophosphamide + doxorubicin/pirarubicin (AC regimen) and cyclophosphamide + epirubicin (EC regimen), were entered in the study.

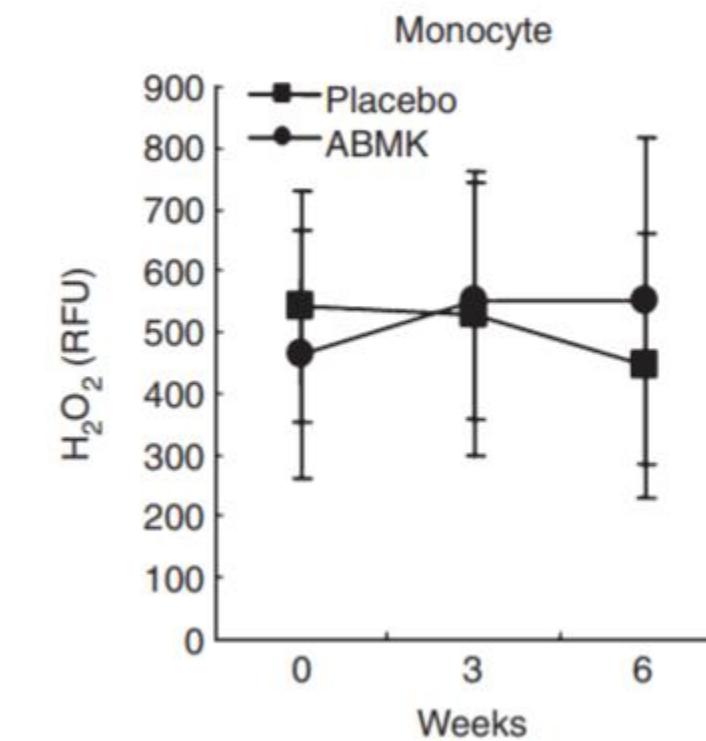
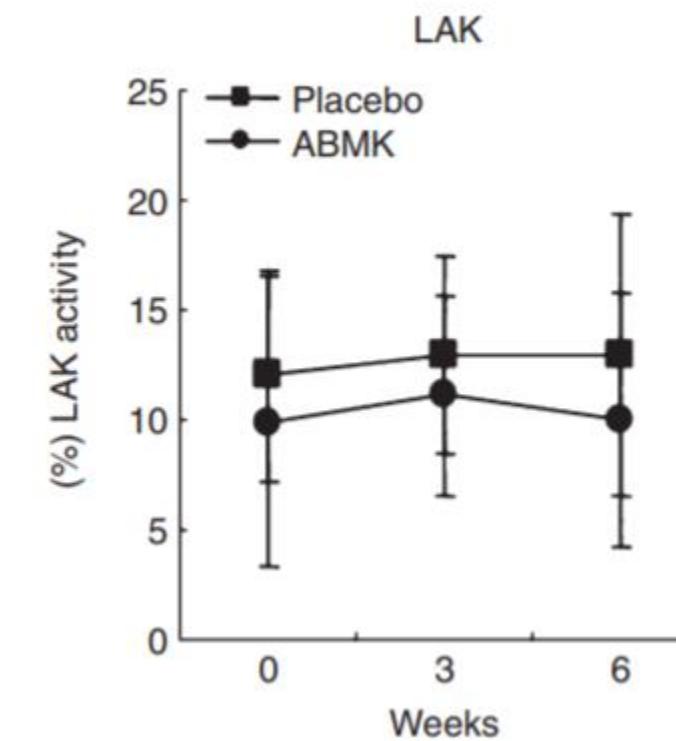
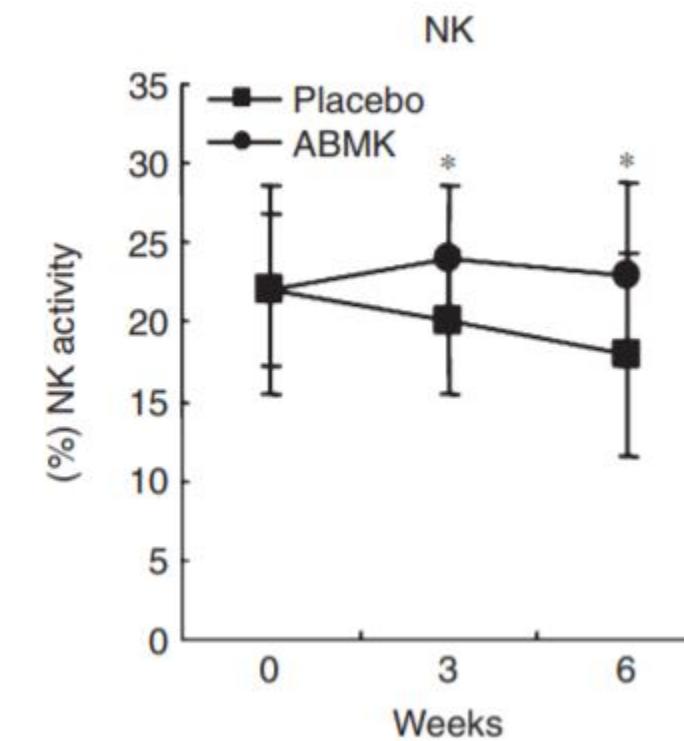
The patients were randomly divided into either an LEM or a placebo tablet group; the tablets were orally ingested daily over 2 courses of each therapy. In the placebo group, the total scores for QOL were lower on day 8 of the second course of chemotherapy compared with the baseline scores, whereas in the LEM group the scores had not decreased. In the placebo group, the QOL functional well-being score was lower on day 8 after both the first and second courses of chemotherapy compared with the baseline score, but it had not decreased in the LEM group. Evaluation of immunological parameters indicated that an increase in the proportion of regulatory T cells to peripheral blood CD4(+) cells tended to be inhibited in the LEM group compared with the placebo group. Oral LEM that was coadministered with anthracycline-based chemotherapies was useful for maintaining patients' QOL and immune function. Thus, LEM appears to be a useful oral adjuvant for patients receiving anthracycline-based chemotherapy.

4. Immunkompetenz erhalten



Natural killer cell activity and quality of life were improved by consumption of a mushroom extract, Agaricus blazei Murill Kyowa, in gynecological cancer patients undergoing chemotherapy

doi: 10.1111/j.1048-891X.2004.14403.x



4. Mikrobiom erhalten



Anti-breast Cancer Enhancement of a Polysaccharide From Spore of Ganoderma lucidum With Paclitaxel: Suppression on Tumor Metabolism With Gut Microbiota Reshaping

doi: 10.3389/fmicb.2018.03099

Abstract

[...]. The present work explored the enhancement of a polysaccharide derived from spore of *Ganoderma lucidum* (SGP) with PTX in a murine 4T1-breast cancer model. [...] 16S rRNA sequencing revealed a restoration by the combination treatment on gut microbiota dysbiosis induced by PTX, especially that *Bacteroides*, *Ruminococcus*, and other 5 genera were significantly enriched while the cancer-risk genera, *Desulfovibrio* and *Odoribacter*, were decreased. Moreover, spearman correlation analysis showed that abundance of *Ruminococcus* was significantly negative-associated with the amount of fructose-6-phosphate within the tumor. Collectively, the present study suggests the clinical implication of SGP as an adjuvant candidate for PTX against breast cancer, which possibly relies on the regulation of tumor metabolism and gut microbiota.

Pilze für die Prävention und Unterstützung

Reishi – erhöhte Ansprechrate, antiangiogen, zytotoxisch, antimetastatisch, darmregulierend – Tagesdosis 1500-2000 mg

Maitake – immunstärkend, reduzierte Symptome, antiproliferativ – Tagesdosis 1500-2000 mg

Mandelpilz – immunstärkend, antitumoral, antiangiogen, reduzierte Symptome – Tagesdosis 1000-1500 mg

Shiitake – immunstärkend, antitumoral, erhöhte Ansprechrate – Tagesdosis 1500 mg

PSK – immunstärkend, zytotoxisch, erhöhte Überlebensrate – Tagesdosis 1000-2000 mg

Höchste Reinheit, Qualität, Dual-Extrakte

+ Vitamin C (erhöhte Bioverfügbarkeit)

"We are close but still not there"

Ganoderma lucidum for Cancer Treatment: We Are Close but Still Not There (2015)

<https://doi.org/10.1177/1534735414568721>

Abstract

The medicinal fungus *Ganoderma lucidum* has been used in traditional Chinese medicine for millennia to improve health and promote longevity. The idea of using *G. lucidum* for cancer treatment is based on numerous laboratory and preclinical studies with cancer and immune cells as well as animal models demonstrating various biological activities *in vitro* and *in vivo*. **For example, *G. lucidum* possesses cytotoxic, cytostatic, antimetastatic, anti-inflammatory, and immunomodulating activities.** Limited clinical studies, including case reports and randomized controlled trials, suggest *G. lucidum* as an alternative adjunct therapy for stimulating the immune system in cancer patients. To confirm the efficacy of *G. lucidum* in cancer treatment, systematic translational research programs should be started worldwide. **In addition, only standardized preclinically evaluated, biologically active *G. lucidum* extracts should be used in alternative treatments.** This approach will lead to the development of standardized *G. lucidum* preparations with specific chemical fingerprint-associated anticancer activities.

Superkonzentrate



- 1200 mg biologischer Extrakt aus Reishi (*Ganoderma lucidum*)
- 1500 mg biologischer Extrakt aus Mandelpilz (*Agaricus blazei*)
- 1500 mg biologischer Extrakt aus Maitake (*Grifola frondosa*)
- 250 mg Fruchtextrakt aus Camu-Camu (*Myrcaria dubia*)
- PSK



Superkonzentrate

Mico-Men



Mico-Pne



Mico-)nco



Mico-Digest



Mico-Mama



Prostata

+ Austernpilz

Lunge

+ Shiitake
+ Cordyceps

Blut, Lymphe, Haut

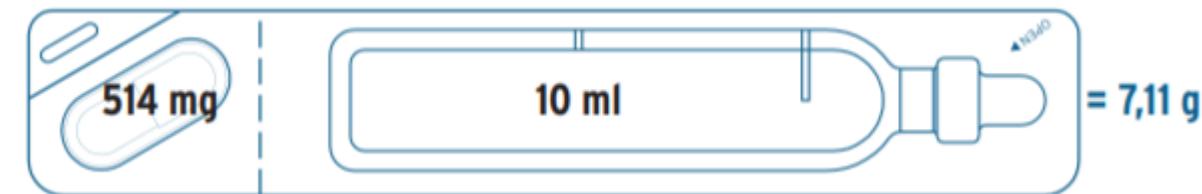
Magen, Darm, Leber, Pankreas

Brust

+ Löwenmähne
+ Austernpilz

+ Eichhase

30 x



Superkonzentrate

Mico-Men



~~292 €~~
263 €

Mico-Pne



~~341 €~~
307 €

Mico-)nco



~~263 €~~
237 €

Mico-Digest



~~341 €~~
307 €

Mico-Mama



~~292 €~~
263 €

10 % Rabattcode: **mico10**

>> Im Webshop von Hifas da Terra <<

Mico Five



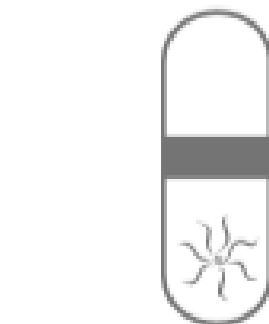
Extrakte aus ...

- Reishi
- Chaga
- Shiitake
- Maitake
- Mandelpilz

10 % Rabattcode: mico10

Qualität bei Hifas da Terra

- Eigener Anbau in Spanien
- Bio-Qualität
- Stammanalyse
- Schonende Verarbeitung
- Dual-Extraktion
- GMP
- Antioxidationsbänder
- Chemische Analysen
- Schadstoffanalysen
- 100 % rückverfolgbar
- Soziale & ökologische Verantwortung
- Beteiligung an der Forschung



Kapseln mit
Antioxidationsband



Trocknen unter
natürlichen Bedingungen



Nicht gentechnisch
verändert



Zertifizierte, ökologische
Produktion



Good Manufacturing Practices
CERTIFIED



GMP-Zertifikat
Gute
Herstellungspraxis

Aktuelle onkologische Studien

Mico-Men



Mico-Pne



Mico-)nco



Mico-Digest



Mico-Mama



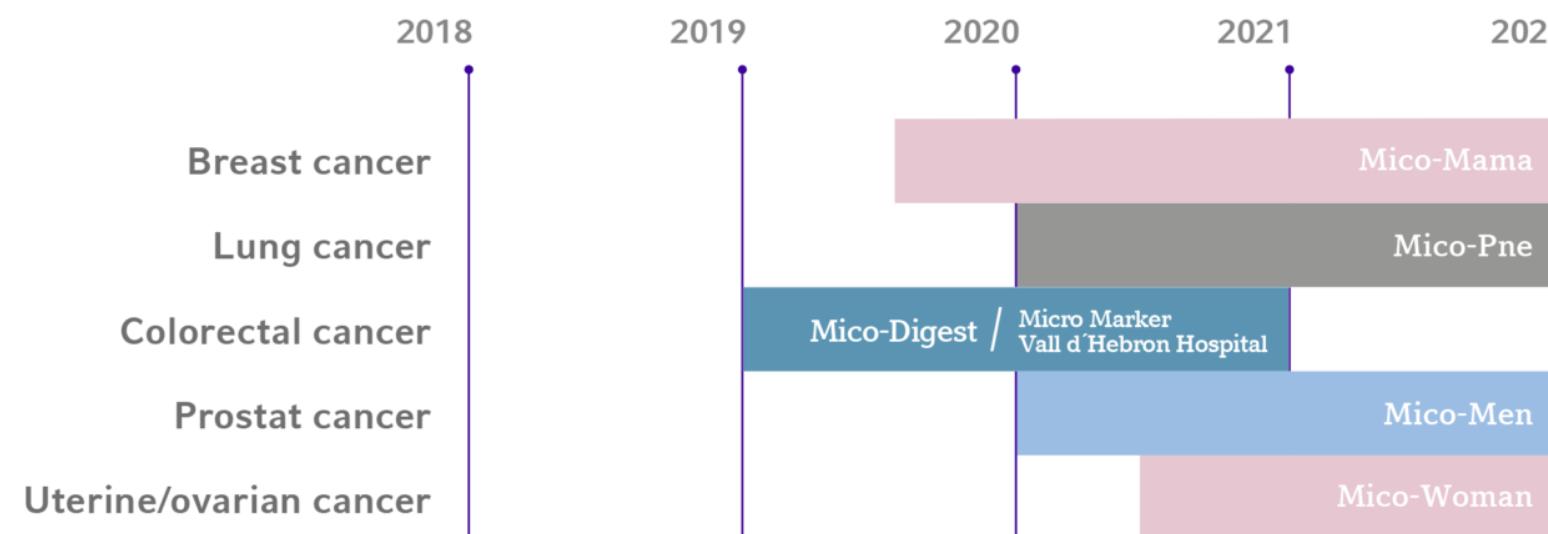
Prostata

Lunge

Blut, Lymphe, Haut

Magen, Darm, Leber, Pankreas
Brust

Quadrennial pipeline of the development of the clinical trials on Myotherapy
Hifas da Terra 2018 - 2022



Aktuelle Beobachtungsstudien



Prof. Dr. Irenäus A. Adamietz
Direktor

Seit 1998

Direktor der Klinik für Strahlentherapie und Radioonkologie

- Beobachtungsstudie mit dem Katholischen Klinikum Bochum
- Hyperthermie + Superkonzentrate



- Beobachtungsstudie mit dem Gynokologischen Zentrum Kurbacher

Haben Sie Fragen?

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