

# Complementary and alternative medicine for patients with cancer

This is an excerpt from the full technical report, which is written in Norwegian.

The excerpt provides the report's main messages in English.

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Systematic review

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Norwegian Knowledge Centre for the Health Services summarizes and disseminates evidence concerning the effect of treatments, methods, and interventions in health services, in addition to monitoring health service quality. Our goal is to support good decision making in order to provide patients in Norway with the best possible care. The Centre is organized under The Norwegian Directorate for Health, but is scientifically and professionally independent. The Centre has no authority to develop health policy or responsibility to implement policies.

We would like to thank all contributors for their expertise in this project. Norwegian Knowledge Centre for the Health Services assumes final responsibility for the content of this report.

Norwegian Knowledge Centre for the Health Services  
Oslo, June 2011

# Key messages

In Norway more than a third of all patients with cancer use some form of complementary or alternative therapy (CAM). In order to support The Norwegian Cancer Society's work with information in this field we have identified and summarized 39 systematic reviews on the efficacy and safety of some main complementary and alternative therapies for patients with cancer.

The Norwegians law from 2003 gives the following definition of alternative treatment: Alternative treatment means health-related treatment as practiced outside the health service and are not performed by licensed health care professional. Treatment that is exercised in the health service or by an authorized health care providers, however, covered by the term alternative treatment when used methods which are mainly used outside the health service. When patients use alternative therapies in addition to the treatment they receive at the hospital, it is also called complementary or integrated treatment.

We searched for systematic reviews documenting efficacy and safety of complementary and/or alternative therapy (CAM) used among patients with cancer. We included systematic reviews of the following methods or therapies: Vitamins and minerals, food supplements, different types of herbs (also pharmacologically produced), acupuncture, reflexology, massage, aromatherapy, hypnosis, homeopathy, traditional Chinese medicine, and various body and mind techniques.

The evidence from these 39 systematic reviews, with a few exceptions, was generally of low quality, and most results are uncertain.

*There is a lack of evidence for the efficacy and safety for most types of alternative methods for treatment and symptom relief for patients with cancer.* For some of the alternative treatment methods there is evidence of adverse events. Further research is required. When it comes to safety, it should be considered whether it is justifiable to carry out major new studies with measures that have shown serious side effects.

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Complementary and alternative medicine for patients with cancer

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We have not assessed alternative medicine in the *prevention* of cancer.

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# Executive summary (English)

## Complementary and alternative medicine for patients with cancer

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### Background

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In Norway more than a third of all patients with cancer use some form of complementary or alternative medicine (CAM). In order to support The Norwegian Cancer Society's work with information in this field we have identified and summarized systematic reviews on the efficacy and safety of complementary and alternative therapies for patients with cancer.

### Objective

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The objective of this review is to assess the evidence on the efficacy and safety of different therapies in alternative medicine in use for cancer treatment. We did not assess the evidence on the efficacy of alternative medicine in the *prevention* of cancer.

### Method

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The following databases were searched in February 2010 for systematic reviews on cancer and CAM: The Cochrane Library, DARE, Science Citation Index, Medline, EMBASE, Pedro, Amed and PsycINFO. Two people independently read all unique titles and abstracts identified in the literature search and assessed the relevance in relation to the inclusion and exclusion criteria. The methodological quality of the studies was assessed by two review authors independently. We graded the quality of evidence for the main outcomes where it was appropriate using GRADE. It was not possible to summarize the results for efficacy and safety for all selected primary endpoints or measures. If there were overlapping reviews, we included the last updated systematic review of good quality. Two people independently read the reviews and extracted data on the effects of the interventions on the outcomes. We categorized the report based on different alternative therapies.

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## Results

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We identified 2 199 titles in the literature searches for systematic reviews. 39 systematic reviews met the inclusion criteria. These systematic reviews assessed the efficacy or safety of complementary and/or alternative therapy used among patients with cancer. Most studies tried alternative therapy in addition to standard therapy. The quality of evidence from these 39 systematic reviews was generally of low or very low quality, and most results are therefore uncertain. This does not mean that there is no difference, but based on the available documentation, there is no convincing evidence for the efficacy and safety for most types of alternative methods for cancer treatment of cancer.

### Food supplements

We included three systematic reviews that assess the efficacy of *food supplements* (Mistletoe, Thymus therapy). No effect estimates are provided and the quality of evidence is very low. There is uncertainty whether the interventions have an effect on survival, side effects of chemotherapy treatment, and side effects of the intervention.

### Antioxidants

We included six systematic reviews of different *antioxidants*. The survey had a mixed population of patients with cancer included. Outcome measures were survival, tumor response, side effects of chemotherapy treatment, quality of life, and safety. The quality of evidence was very low and there is uncertainty whether antioxidants have an effect on the outcomes investigated.

### Herbs and plants (including those that are pharmacologically produced)

We included 10 systematic reviews of different *herbs and plants* (traditional Chinese medicine) which reported on the efficacy on survival, tumor response, adverse effects of treatment, and safety. The quality of evidence was very low in seven out of ten systematic reviews.

One systematic review reported possible effect of *Astragalus* on survival and tumor response in patients with non small cell lung cancer (NSCLC). The results are based on 34 randomized trials with a total of 2815 patients. The quality of evidence was low.

One systematic review reports on the possible effect of *Kanqlaite* on tumor response and quality of life in patients with NSCLC. The results are based on 26 randomized trials with a total of 2209 patients. The quality of evidence was low.

One systematic review reported possible effect of *traditional Chinese medicine combined with transcatheter arterial chemoembolization* on survival and partial response in patients with primary liver cancer. The results are based on 45 randomized trials with a total of 3236 patients. The quality of evidence was low.

Treatment trials with *Laetrile* (a synthetic form of amygdalin) reported serious adverse events as cyanide poisoning. Treatment trials with *Ukraine* reported serious adverse events as hepatitis and bleedings.

Two systematic reviews reported data on the effect of *Aloe Vera and honey*. The quality of evidence was very low and it is uncertain whether these interventions are effective.

A systematic review reported effect of *cannabis* on chemotherapy induced nausea and vomiting (1,366 patients). Cannabis, along with antiemetic drugs is probably more effective than antiemetic drugs alone to reduce chemotherapy induced nausea (RR 1.38, CI 1.18 to 1.62) and vomiting (RR 1.28, CI 1.08 to 1.51). Use of cannabis causes serious side effects as hypotension and depression. The quality of evidence was moderate.

### **Acupuncture**

We included five systematic reviews on the effects of *acupuncture* on nausea, vomiting, cancer-related pain and other side effects caused by chemotherapy in patients with cancer. The quality of evidence was very low for all statements with one exception: A systematic review with a total of 1247 patients who received chemotherapy, reported that acupuncture probably has an effect on vomiting (RR 0.82, CI 0.69 to 0.99). The quality of evidence was moderate. *Acupressure* may have effect on nausea (SMD -0.19, CI -0.37 to - 0.01). The quality of evidence was low.

### **Homeopathy, massage, reflexology, body and soul interventions**

One systematic review with a total of 664 patients reported preliminary data that homeopathy could possibly have an effect on radiation induced irritation of the skin (Dermatitis). The quality of evidence was low.

We included four systematic reviews reporting efficacy of massage and reflexology, on pain, nausea and quality of life. No effect estimates were reported and the quality of evidence was very low.

We included systematic reviews on efficacy of relaxation techniques, hypnosis, guided imagery, Tai Chi or Qigong for patients with cancer. The quality of evidence is very low and there are uncertainties whether the interventions have effects on the outcomes.

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## **Discussion**

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In this report we wanted to answer questions about efficacy of alternative therapies used for cancer patients. We also aimed to assess if the various alternative medical methods are safe to use or whether these treatments can give patients serious side effects. Unfortunately very few of the systematic reviews we have included can answer these questions. There is a lack of evidence to draw convincing conclusions

about efficacy and safety of most types of alternative therapies used by patients with cancer. The 39 included systematic reviews present a wide range of complementary and alternative therapies but these are based on included studies with low methodological quality. Many of the studies were small, and had mixed interventions and populations. The interventions were differently both in content, intensity, dosage and duration. Outcomes were reported differently, the evidence was often sparsely described, and incomplete results were reported. It is only within a few interventions (acupuncture and cannabis) we can conclude about efficacy, most of the results are uncertain. Nevertheless, we believe that in disseminating these uncertainties, we cover up for a major knowledge gap, and that this may be of benefit to both health professionals, patients, and for further research.

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## **Conclusion**

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There are many studies and systematic reviews that have assessed the impact of various alternative therapies. The quality of evidence was too low to draw definitive conclusions for most patient groups and interventions. For some of the alternative treatment methods there is evidence of adverse events. This is partly because there are too few and too small studies, but also because alternative medicine does not have a long tradition to do robust research methods. There is a need for more studies with robust designs to evaluate efficacy and safety of alternative medicine. The studies should be sufficiently large and with long enough follow-up to provide reliable answers to the most important outcomes. There is a need for more research into both efficacy and safety for most of the covered interventions.

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