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## **21981636: Synergistic effect of EMF-BEMER-type pulsed weak electromagnetic field and HPMA-bound doxorubicin on mouse EL4 T-cell lymphoma.**

[Říhová B<sup>1</sup>](#), [Etrych T](#), [Šírová M](#), [Tomala J](#), [Ulbrich K](#), [Kovář M](#).

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### **Abstract**

We have investigated the effects of low-frequency pulsed electromagnetic field (LF-EMF) produced by BEMER device on experimental mouse T-cell lymphoma EL4 growing on conventional and/or athymic (nude) mice. **Exposure to EMF-BEMER slowed down the growth of tumor mass and prolonged the survival of experimental animals.** The effect was more pronounced in immuno-compromised nude mice compared to conventional ones. Acceleration of tumor growth was never observed. No measurable levels of Hsp 70 or increased levels of specific anti-EL4 antibodies were detected in the serum taken from experimental mice before and at different intervals during the experiment, i.e. before solid tumor appeared, at the time of its aggressive growth, and at the terminal stage of the disease. A significant synergizing antitumor effect was seen when EL4 tumor-bearing mice were simultaneously exposed to EMF-BEMER and treated with suboptimal dose of synthetic HPMA copolymer-based doxorubicin, DOX(HYD)-HPMA. Such a combination may be especially useful for heavily treated patients suffering from advanced tumor and requiring additional aggressive chemotherapy which, however, at that time could represent almost life-threatening way of medication.

**23940071: The effects of the "physical BEMER® vascular therapy", a method for the physical stimulation of the vasomotion of precapillary microvessels in case of impaired microcirculation, on sleep, pain and quality of life of patients with different clinical pictures on the basis of three scientifically validated scales.**

[Article in English, German]

[Bohn W](#), [Hess L](#), [Burger R](#).

**Abstract**

As part of the statutory market monitoring of certified medical devices, 658 valid patient questionnaires were evaluated between April 2011 and March 2013. The questions consisted mainly of three scientifically recognized scales for assessing the changes of sleep, pain and quality of life in patients who had used the "physical BEMER® vascular therapy" for different diseases over 6 weeks. The result clearly shows that there are significant improvements in all areas surveyed through the application of this complementary treatment option, regardless of the underlying disease.

# 22314716: Long-term effects of Bio-Electromagnetic-Energy Regulation therapy on fatigue in patients with multiple sclerosis.

[Haase R<sup>1</sup>](#), [Piatkowski J](#),

## **BACKGROUND:**

Electromagnetic-field therapy has beneficial short-term effects in multiple sclerosis (MS) patients with major fatigue, but long-term data are lacking. PRIMARY STUDY

OBJECTIVES: To evaluate the long-term effects of a specific electromagnetic therapy device (Bio-Electromagnetic- Energy-Regulation [BEMER]) on MS-related fatigue, we designed a crossover control of a previously performed randomized controlled trial and a long-term open-label follow-up trial.

## **DESIGN AND SETTING:**

Crossover and open-label follow-up trials at a single neurological outpatient center.

## **PARTICIPANTS:**

Patients with relapsing-remitting MS who had major fatigue (N = 37 patients).

## **INTERVENTION:**

After a previous randomized controlled trial (exposure to low-frequency pulsed magnetic fields for 8 min twice daily or to placebo treatment for 12 wk), a crossover from control to treatment for another 12 weeks, followed by an open label follow-up trial to 3 years, were done

## **RESULTS:**

Patients previously on placebo during the randomized controlled trial experienced significant reductions in fatigue after crossing over to treatment. The MFIS and FSS scores were significantly lower in the open-label group than in the control subjects after follow-up. Participation in the open-label treatment was the strongest predictor of low fatigue outcome after followup. Electromagnetic-field therapy was well tolerated.

## **CONCLUSIONS:**

In this long-term study, a **beneficial effect of long-term BEMER therapy on MS fatigue was demonstrated**. Electromagnetic-field therapy may be a useful therapeutic modality in MS patients with severe fatigue.

## **24021606: Effects of various physical treatment methods on arteriolar vasomotion and microhemodynamic functional characteristics in case of deficient regulation of organ blood flow. Results of a placebo-controlled, double-blind study.**

[Article in English, German]

[Klopp RC](#), [Niemer W](#), [Schmidt W](#).

### **Abstract**

As part of a placebo-controlled study, high-resolution measurement methods were used to examine, on the basis of representative functional characteristics of microcirculation, whether and to what extent six different, commercially available, physical treatment devices were suitable for influencing, through complementary therapy, deficient blood-flow regulation. Of the six commercially available devices tested, two proved to be ineffective and three not effective enough to be therapeutically relevant. **Only in one device was it possible to show a complementary-therapeutic effect: the device uses a specific, biorhythmically defined stimulus for vasomotion.**

## **23940071: The effects of the "physical BEMER® vascular therapy", a method for the physical stimulation of the vasomotion of precapillary microvessels in case of impaired microcirculation, on sleep, pain and quality of life of patients with different clinical pictures on the basis of three scientifically validated scales.**

[Article in English, German]

[Bohn W](#), [Hess L](#), [Burger R](#).

### **Abstract**

As part of the statutory market monitoring of certified medical devices, 658 valid patient questionnaires were evaluated between April 2011 and March 2013. The questions consisted mainly of three scientifically recognized scales for assessing the changes of sleep, pain and quality of life in patients who had used the "physical BEMER® vascular therapy" for different diseases over 6 weeks. **The result clearly shows that there are significant improvements in all areas surveyed through the application of this complementary treatment option, regardless of the underlying disease.**

## **19422286: Long-term effects of Bio-Electromagnetic-Energy Regulation therapy on fatigue in patients with multiple sclerosis.**

[Haase R<sup>1</sup>](#), [Piatkowski J](#), [Ziemssen T](#).

### **Author information**

#### **Abstract**

#### **BACKGROUND:**

Electromagnetic-field therapy has beneficial short-term effects in multiple sclerosis (MS) patients with major fatigue, but long-term data are lacking. PRIMARY STUDY OBJECTIVES: To evaluate the long-term effects of a specific electromagnetic therapy device (Bio-Electromagnetic- Energy-Regulation [BEMER]) on MS-related fatigue, we designed a crossover control of a previously performed randomized controlled trial and a long-term open-label follow-up trial.

**DESIGN AND SETTING:**

Crossover and open-label follow-up trials at a single neurological outpatient center.

**PARTICIPANTS:**

Patients with relapsing-remitting MS who had major fatigue (N = 37 patients).

**INTERVENTION:**

After a previous randomized controlled trial (exposure to low-frequency pulsed magnetic fields for 8 min twice daily or to placebo treatment for 12 wk), a crossover from control to treatment for another 12 weeks, followed by an open label follow-up trial to 3 years, were done.

**PRIMARY OUTCOME MEASURES:**

The outcome criteria were the Modified Fatigue Impact Scale (MFIS), Fatigue Severity Scale (FSS), German long version of the Center for Epidemiologic Studies Depression Scale (CES-D), Multiple Sclerosis Functional Scale (MSFC), and Expanded Disability Status Scale (EDSS).

**RESULTS:**

Patients previously on placebo during the randomized controlled trial experienced significant reductions in fatigue after crossing over to treatment. The MFIS and FSS scores were significantly lower in the open-label group than in the control subjects after follow-up. Participation in the open-label treatment was the strongest predictor of low fatigue outcome after followup. Electromagnetic-field therapy was well tolerated.

**CONCLUSIONS:**

In this long-term study, a beneficial effect of long-term BEMER therapy on MS fatigue was demonstrated. Electromagnetic-field therapy may be a useful therapeutic modality in MS patients with severe fatigue.