

**May 2007**

**Latest Clinical Report about DE-KA Titan from Chang-An Hospital, Xian/China/C**

We started with a new clinical trial at Chang-An Hospital in Department of Oncology and Pain Clinic in Nov 2006. Fifty patients were involved in this trial.

1. Instrument: DE-KA Titan Pain Reliever
2. Hospital: Department of tumor, Chang An Hospital
3. Number of patients: 50. age: 26-60
4. Pain type: headache (6), migraine (6), rheumatic pain (1), trigeminal nerve pain (3), teeth pain (3), rib pain after injury (2), pain after surgery (3), cancer patients including lung cancer, prostate cancer, bone metastasis of breast cancer, cervical cancer IIIb, totally 26 patients.
5. Methods: procedures were carried out according to the manual provided by DE-KA Titan manufacture. Results were recorded based on patients' complaints before and after instrument intervention.

**6. Results:**

Headache: pain was relieved within 30 min, two patients were relieved at some extent while the other four reported pain was totally disappeared.

Migraine: pain was relieved within 20 min for 90%.

Rheumatic pain: definitely take longer time for pain getting relieved. Patients reported pain was significantly relieved after treatment.

Trigeminal nerve pain: some relieving affect on all three patients.

Toothache: two patients felt significantly relieved while one feel a little relieved.

Rib pain after injury and pain after surgery: all five patients reported pain relieved, but still need painkiller but the frequency was significantly reduced.

Pain caused by cancer: twelve patients reported pain relief, especially when co-treated with oral or injected painkiller; the other six people feel significant relief on the sustaining pain.

No effect on sudden pain. Eight patients with serious cancer reported no relief with either this instrument or painkiller.

**Evaluation:**

DE-KA Titan is very good at relieving headache and migraine; even for relief rheumatic pain and after-surgery pain. It can also improve the pain among cancer patients. Patient with late stage cancer reported less improvement. Most patients would like to involve in free trial. We are convinced that DE-KA is good for patients with sustaining and chronic headache, migraine and rheumatic pain. For late stage cancer patients, we suggest to use multiple treatments including the machine intervention and drug treatment.

### Analysis of effect of DE-KA Titan Pain Reliever

DE-KA Titan Pain Reliever, Made in Germany, relieves pain by inhibiting neural pulse in human and mammals. We started clinical trial of this instrument from Sept 2004 to End Dec 2004. Our second test was from Nov 2006 to End Feb 2007. Total 112 patients have been treated and the effect was reported as below:

diagnosis	numbers	effect				
		Somewhat relief	relief	Significant relief	disappear	No effect
idiopathic lung cancer	37	12	10	7	0	8
idiopathic liver cancer	13	4	4	1	0	4
C r a n i a l metastasis of Otolaryngeal cancer	1	0	0	0	0	1
Bone metastasis of melanoma	2	1	0	0	0	1
Bone metastasis of esophagus cancer	6	3	0	0	0	3
Liver metastasis of gastric cancer	5	2	1	1	0	1
Bone metastasis of breast cancer	10	4	0	3	0	3
Thoracic and a b d o m i n a l surgery	10	5	2	3	0	0
R e c u r r e n t cervical cancer	8	0	4	0	0	4
D i s t a n t metastasis of rectal cancer	4	0	4	0	0	0
Soft tissue pain sciatic nerve pain herniated disc	16	5	4	7	0	0
Total number	112	32% (36)	26%(29)	20% (22)	0	22 (25)





## Clinical Application Report for DE-KA Titan Pain Reliever

The Germany-made DE-KA Titan pain reliever has been tested in the oncology department of Chang An Hospital for about 2 months. Total of 24 patients have used this pain stimulus inhibiting device and the results are summarized below:

Serial No.	Patient	Age	Sex	Diagnosis	Pain Level	Pain killing medicine	Side Effect	Results	Pain killing drug usage
0002T02/02	A	57	F	Gastric cancer with liver metastasis	7	Bucinnazine Tablet	None	Reduced pain	Went into coma (unrelated to the use of DE-KA Titan)
0020T02/02	B	66	M	Nasopharynx cancer with bone metastasis	9	Bucinnazine Tablet	None	No effect	Increased dosage
0011T02/02	B	66	M	Nasopharynx cancer with bone metastasis	9	Bucinnazine Tablet	None	No effect	Increased dosage
0015T02/02	B	66	M	Nasopharynx cancer with bone metastasis	9	Bucinnazine Tablet	None	No effect	Increased dosage
0020T02/02	C	51	M	Non small cell lung cancer with brain metastasis	9	Mannitol + Dihydrocodeine	Dizziness	Reduced pain	Stopped taking Mannitol & Hormone
0007T02/02	D	69	M	Non small cell lung cancer with brain metastasis	7	Mannitol	None	Substantially reduced pain	Stopped medication
0007T02/02	E	72	F	Lung cancer with cervical vertebra metastasis	10	Sulphate Morphine	Nausea	Substantially reduced pain	Reduced dosage & change to Ibuprofen tablet
0011T02/02	F	77	M	Superior sulcus lung cancer with vertebra metastasis	9	Morphine Hydrochloride Tablet	None	Substantially reduced pain	Stopped using pain medicine
0015T02/02	G	69	M	Primary lung cancer	7	Diclofenac And Codeine	None	Reduced pain	Reduced pain medicine
0002T02/02	H	67	M	Lung cancer with multiple metastasis	7	Tramadol Tablet + Injection	None	Substantially reduced pain	Stopped using pain killer drugs
0020T02/02	I	39	M	Primary liver cancer with metastasis	6	Fenbid	None	No effect	Stopped using pain medicine gradually after radiotherapy
0020T02/02	J	42	M	Primary liver cancer with metastasis	8	Morphine Injection	None	No effect	Increased dosage
0011T02/02	K	41	M	Liver cancer with celiac lymph node metastasis	8	Sulphate Morphine	None	Substantially reduced pain	Reduced pain medicine after radiotherapy
0007T02/02	L	52	M	Gallbladder cancer with liver and pancreas metastasis	8	Morphine Hydrochloride Tablet	None	Reduced pain	Stopped using pain medicine after radiotherapy
0007T02/02	M	60	F	Breast cancer with multiple metastasis	6	Fenbid	Slight increase in body temp	No effect	Continued medication
0011T02/02	N	67	F	Esophageal cancer with bone metastasis	8	Morphine Hydrochloride Tablet	None	Reduced pain	Changed to Bucinnazine Tablet
0002T02/02	O	53	F	Breast cancer	7	N/A	None	Substantially reduced pain	Did not take any pain medication
0007T02/02	P	48	M	Colon cancer with ureter metastasis	7	Bucinnazine Injection	None	Reduced pain	Stopped medication
0015T02/02	Q	83	M	Melanoma with multiple metastasis	6	Tramadol Tablet	None	Reduced pain	Continued to use medication until passed away
0015T02/02	R	74	M	Melanoma with multiple metastasis	8	Sulphate Morphine	None	Reduced pain	Changed to Ibuprofen
0002T02/02	S	65	F	Uterus cervical cancer with recurrence and bone metastasis	7	Bucinnazine Tablet	None	Substantially reduced pain	Stopped using pain medicine
0015T02/02	T	50	F	Uterus cervical cancer with recurrence	6	N/A	None	Reduced pain	Reduced pain after radiotherapy
0020T02/02	U	59	F	Rectum cancer with pelvic lymph node metastasis	7	A.P.C.	None	Reduced pain	Gradually increased dosage
0007T02/02	V	71	M	Rheumatoid arthritis	7	Paracetamol	None	Substantially reduced pain	Stopped using pain medicine





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### **Analysis:**

Out of the 24 samples, there are 6 patients suffering from primary lung cancer (2 cases with bone metastasis, 3 cases with vertebra metastasis, 1 case with brain metastasis), 4 patients with primary liver cancer (1 case with gallbladder cancer), 1 patient suffering from nasopharynx cancer with bone metastasis, 2 patients had melanoma with multiple metastasis, 1 patient with esophageal cancer with bone metastasis, 2 patients with gastric cancer with liver metastasis, 2 patients suffering from breast cancer with multiple metastasis, one post-operation breast cancer patient, one post-operation colon cancer with ureter metastasis patient, 2 patients with recurring uterus cervical cancer, 1 patient suffering from rectum cancer with pelvic lymph node metastasis, one patient with rheumatoid arthritis. All the above patients experienced medium to severe pain, and had been taking oral pain killer drugs such as bucinnazine tablet, diclofenac and codeine tablet, and hydrochloric morphine tablet. Patients with severe pain had maphine injection or sulphate morphine injection. Some patients with bone metastasis, vertebra metastasis and brain metastasis also received radiotherapy.

Results: 18 samples had experienced some or substantial pain relief, effectiveness of 75%. These patients had less pain, some of them reduced pain medication, and 8 of the samples experienced substantial pain relief and stopped taking pain medicine. Six of the patients did not feel much difference with the use of pain reliever. One patient suffered from nasopharynx cancer with bone metastasis was having severe headache after receiving radiotherapy had tried 3 pain reliever with different serial numbers without effect. One of the patients went into a coma (unrelated to the use of pain reliever) and was not able to provide further feedback. The patient with rheumatoid arthritis experienced substantial pain relief and stopped taking pain medication.

In summary, the DE-KA Titan pain relievers of 5 different serial numbers used by the cancer patients have demonstrated certain pain relieving capability. About 75% of the samples have experienced pain relief, with 33% feeling substantial pain relief. Good results were achieved with rheumatoid arthritis and post-operative patients. Currently we are expanding the usage, educating patients about the benefits and the theories behind this pain reliever, changing the patients' perception so that they will try DE-KA Titan pain reliever. We believe using this pain reliever can help many patients manage their pain and improve their quality of life. However, some of the bed-bound patients expressed discomfort with the pads against their spinal cord and were not willing to continue using the pain reliever, which is an area for improvement.

**Chang An Hospital Oncology Department**  
**21<sup>st</sup> October 2004**

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### **Analysis:**

The term of "pain", originated from Latin "Poena", means "punish". It was a long before people started gaining knowledge about pain. With the development of medical science, the concept of pain has evolved from a single dimensional "sense model" into a multidimensional model which involves interaction among many factors including physical, psychological, sensational, emotional, social behavior and so on. Pain is not only a symptom but a disease. Patients who are complaining about pain needs treatment as those are suffering from other disease. Currently the treatment of pain is limited to oral, muscle injection and vein pain relieving pump. And recently rectal medical application or some pan relieving patch is getting more application. Health care professional are now adapting new rule to treat pain with individualized treatment plan to treat pain. The purpose is to improve the quality of life and relive patients from pain suffering.

Compare with using dose or medicines, DE-KA Titan Pain Reliever is special medical instrument that can relieve pain through inhibiting the neuronal excitation, thus inhibiting or decreasing the input from pain nerve. It has no side effect and easy to use, does not need ancillary assistance.

Among this 112 cancer patients, there are 37 idiopathic lung cancer patients (20 patients have bone metastasis, 9 patients have spine metastasis and 7 have brain metastasis), 13 idiopathic liver cancer patients (including one gall bladder cancer patient), 1 otolaryngeal cancer patient with cranial metastasis, 2 melanoma patients with multiple metastasis, 6 esophagus patients with bone metastasis, 5 gastric cancer patients with liver metastasis after surgery, 10 breast cancer patients with multiple metastasis, 10 patients after thoracic and abdominal surgery, 8 recurrent cervical cancer patients, 4 rectal cancer patients with liver metastasis, 16 miscellaneous patients including elder rheumatic arthritis, herniated disc, sciatic pain and should pain. Those patients are all suffering middle to serious pain. Oral application of some painkiller such as Qiang Tong Ding, Shu Er Fen, or even morphine. Some serious patient has to be co-treated with morphine muscle injection or oral Mei Shi Kang Ding. Among those cancer metastasis patients co-treated with radiation, most reported relief of pain and decrease the dose for painkiller medicine, some even stopped oral medicine.

In summary, application of DE-KA Titan Pain Reliever does relieve the pain even with different extent to different patients. About 70% of patients reported pain relief and 20% of patients reported significant pain relief, especially for patients with after surgery pain, rheumatic arthritis pain, soft tissue pain, sciatic pain or herniated disc pain. We are now trying to get more application and educate and encourage in-hospital patients to try new method for improving the pain symptom. For those late-stage cancer patients who undergo malnutrition and stay in bed for a long time, the application of the instrument cause some discomfort when the electrode press patients' back, therefore, they refuse to use it. We suggest improving the procedure by changing the shape and position of electrodes to minimize the discomfort caused by machine in order to get more application.

**Overall the DE-KA Titan Pain Reliever will be a constant Instrument in our hospital to help our patient to relieve pain without or less using drugs. We will also recommend the DE-KA Titan to other hospitals. We are very confident, convinced and trust this “Made in Germany” medical product.**