

## Journal Watch

### **Effect and Safety of Transdermal Buprenorphine: A Randomized, Placebo-Controlled Trial in 289 Patients with Severe Cancer Pain**

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#### **Summary**

**Background:** Opioids are recommended for treatment of severe cancer pain in advanced stages of disease. Data concerning the efficacy of buprenorphine in cancer pain has been quite limited. Transdermal buprenorphine was compared to placebo in cancer patients in this trial.

**Design:** Randomized, placebo-controlled trial

**Methods:** Opioid-tolerant patients with cancer pain requiring strong opioids in the dose range of 90-150 mg/d oral morphine equivalents entered a two-week run-in phase, during which they were converted to BUP TDS. Patients who could be stabilized on BUP TDS were randomized to BUP TDS or placebo patch for a two-week maintenance phase. Rescue medication (BUP SL 0.2mg) was allowed as required. Response was defined as a mean pain intensity of <5 (0-10 scale) and a mean daily buprenorphine sublingual intake of <2 tablets during the maintenance phase.

**Results:** Of 289 patients who entered the run-in phase, 100 discontinued treatment due to lack of efficacy or adverse events; 189 patients continued treatment in the maintenance phase (94 BUP TDS, 95 placebo), of whom 31 discontinued treatment (7 BUP TDS, 24 placebo). A significant difference in the number of treatment responders was observed: 70 BUP TDS (74.5%) vs. placebo (50%) (p=0.0003). This result was supported by a lower daily pain intensity, lower intake of buprenorphine sublingual tablets and fewer dropouts in the BUP TDS group. The incidence of adverse events was slightly higher for BUP TDS.

**Conclusion:** BUP TDS 70ug/h is an efficacious and safe treatment for patients with severe cancer pain.

#### **Commentary:**

**Strengths:**

- 1) Randomized, double-blind, placebo-controlled design (BUP TDS vs placebo)
- 2) Multi-centered (26 centers), multi-nation trial
- 3) Run-in phase utilized to ensure efficacy for two weeks and then patients were allocated to either placebo or treatment groups
- 4) Used well-validated outcomes measure to assess pain in both placebo and treatment groups
- 5) Sufficiently large groups (n=94 in treatment and n=94 in placebo)
- 6) Rescue medicine was allowed for both treatment and placebo to allow for an easier comparison
- 7) Reinforced the effects of placebo treatment alone on pain control

**Weaknesses:**

- 1) Only patients who responded to BUP TDS were randomized after run-in phase
- 2) Larger number of patients discontinued BUP TDS treatment and there was no indication as to what the demographics of this group was
- 3) No comparative group utilized in this study (although they did suggest this as something to consider in future trials)

**Summary:**

This trial was an invaluable trial which demonstrated the efficacy and safety of the use of BUP TDS for severe cancer pain. It was also interesting how this trial demonstrated the effects of placebo use. This trial also demonstrated that BUP TDS is a useful medication to use due to both its efficacy and due to its safety profile. More research, in a future trial, would be useful to compare the efficacy of BUP TDS when comparing it to morphine or other analgesics that are utilized in the palliative care setting.