OFIRMEV® (acetaminophen) Injection Overview

Mallinckrodt Pharmaceuticals

Indications

- OFIRMEV is indicated for the management of mild to moderate pain, management of moderate to severe pain with adjunctive opioid analgesics, and reduction of fever.

Target audiences

- Pharmacy &Therapeutics committee, pharmacy managers, colorectal surgeons, bariatric surgeons, orthopedic surgeons, general surgeons, OB/GYNs, anesthesiologists, cardiothoracic surgeons, surgical physician assistants, surgical nurse practitioners, critical care/intensivists, hospitalists, emergency medicine, burn specialists, general healthcare practitioners, post-anesthesia care unit RNs, certified registered nurse anesthetists, floor RNs, patients, and caregivers.

Current market size

Annualized OFIRMEV volume	8,660,134
Annualized IV analgesic market volume	264,289,087
Annualized OFIRMEV volume share	3.3%

*12 months ending September 2015. Source: Symphony Health Analytics Monthly Data.

Current market penetration

	Surgical	Non-surgical	Surgical/Non-surgical
Inpatient	14.5%	2.2%	10.7%
Outpatient	7.1%	0.8%	3.4%
In/Out patient	10.5%	1.1%	5.9%

All data are 12 months ending March 2015. Source: Premier Monthly Report Dated September 2015.

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Current clinical trials

MNK Protocol #	Title	Phase	# Subjects
MNK14504055	A Randomized, Placebo-Controlled, Double-Blind, Two-Part, Cross-over Study in Healthy Adult Male Subjects to Compare the Reduction in Pain Intensity After Single-Dose Administration of Intravenous or Oral Acetaminophen and Intravenous Morphine by Using UVB Burn and Intradermal Capsaicin Experimental Pain Models	4	Part 1 = 12 Part 2 = 36
MNK14504054	A Randomized, Double-Blind, Double-Dummy, Active-Controlled, Repeated-Dose, Multicenter Study to Compare Intravenous and Oral Acetaminophen for the Treatment of Acute Moderate to Severe Pain in Combination with Patient-Controlled Analgesia with Morphine in Adults Following Elective Total Knee Arthroplasty	4	130
Meta-analysis	Quantitative, epidemiological study design to systematically assess pooled results from existing studies comparing the use of IV APAP and morphine in the emergency department.		

Healthcare Economics Outcomes Research data

HEOR Trial	Objective	Endpoints	Initiation	Completion
Marketscan	To compare resource use and costs in patients treated for postoperative pain with IV APAP ± other analgesics vs patients treated with IV opioid monotherapy	• Length of stay and total health care costs • 30-day readmissions • Opioid-related adverse events	**4QFY15**	**1QFY16**
Premier	To compare resource use and costs in patients treated for postoperative pain with IV APAP ± other analgesics vs patients treated with IV opioid monotherapy	• Length of stay and total health care costs • Opioid consumption • Opioid-related adverse events	**4QFY15**	**1QFY16**
Crimson	To estimate potential cost savings related to decreased opioid use and potential increased use of OFIRMEV	• Length of stay and total health care costs • Opioid-related adverse events	**4QFY15**	**1QFY16**
MMA	Conduct a systematic review of the US biomedical literature on multimodal analgesia (MMA) including IV acetaminophen vs IV opioid monotherapy	• Efficacy • Safety and tolerability • Health economics and QOL endpoints	**4QFY15**	**3QFY16**
Pooled analysis of RCTs	To examine patient-centric benefits of reduced opioid consumption (pain relief, satisfaction, adverse events, composite outcomes)	• Pain relief • Satisfaction • Opioid-related adverse events	**3QFY15**	**1QFY16**
Other	AMCP dossier annual updates		**3QFY16**	**4QFY16**

Improved Acute Pain Management

OFIRMEV® (acetaminophen) injection
1000 mg/100 mL (10 mg/mL)

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Indications

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Dosing Information

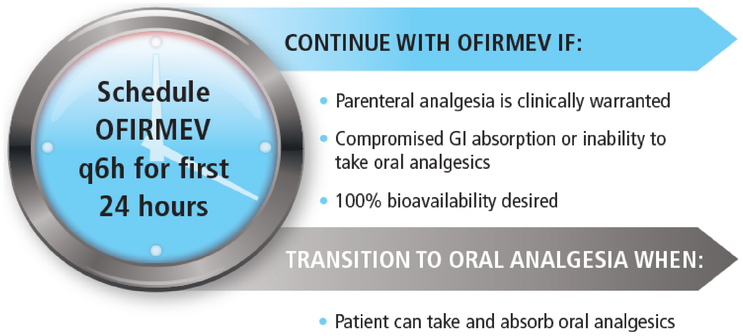
Dosing of OFIRMEV for adults, adolescents, and children ≥2 years old[9]

Age group	Dose given every 4 hours	Dose given every 6 hours	Maximum single dose	Maximum total daily dose of acetaminophen (by all routes)
Adults and adolescents (13 years and older) weighing ≥50 kg	650 mg	1000 mg	1000 mg	4000 mg in 24 hours
Adults and adolescents (13 years and older) weighing <50 kg	12.5 mg/kg	15 mg/kg	15 mg/kg (up to 750 mg)	75 mg/kg in 24 hours (up to 3750 mg)
Children 2 to 12 years old				

- Only IV agent approved to treat both pain & fever in patients ≥2 yrs old.
- Given as single or repeated dose.
- Minimum dosing interval is q4h.
- No dose adjustment required when transitioning to oral acetaminophen in adults & adolescents.
- Administered as 15-min IV infusion.

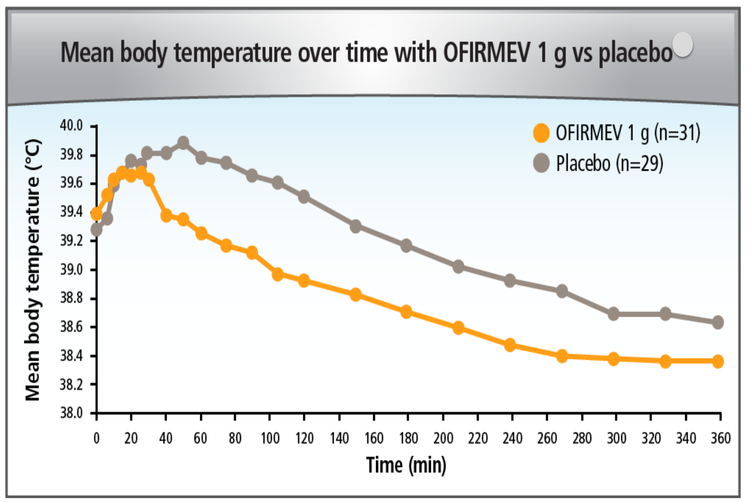
OFIRMEV [package insert]. Hazelwood, MO: Mallinckrodt Hospital Products, Inc; 2014

Q6h Dosing Schedule



- Administer pre-op, then schedule q6h.
- Maximum total daily dose for adults ≥50 kg is 4000 mg.

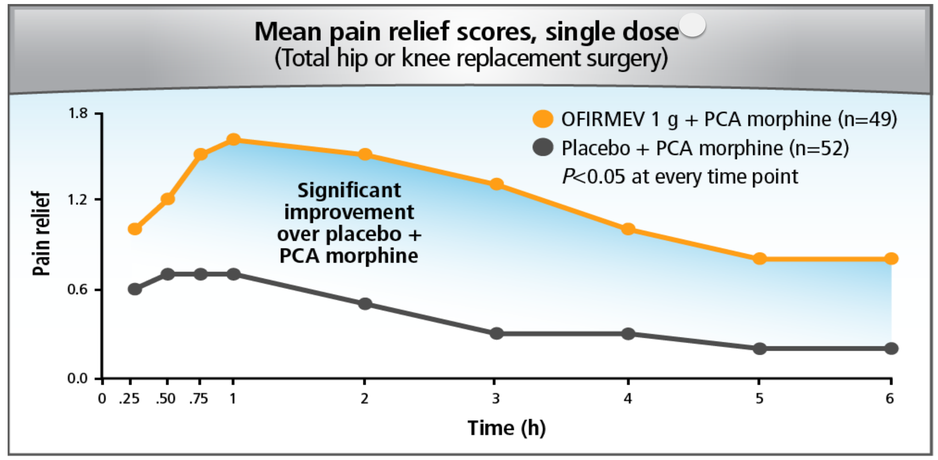
Effective Fever Reduction



- Rapid onset of action—statistically significant temperature differences from baseline vs placebo observed 15 min after infusion
- Significantly reduced fever at each time point from 30 min through 5.5 h vs placebo

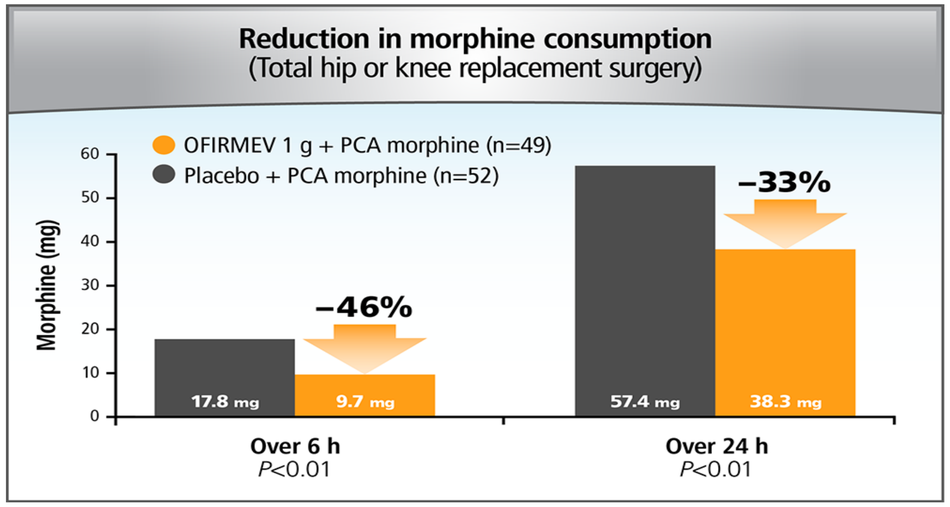
Kett et al. Randomized, double-blind, placebo-controlled clinical trial comparing a single dose of OFIRMEV 1 g and placebo in 60 healthy adult males with endotoxin-induced fever.

Less Pain



Sinatra et al. (Pain Study 1)

Less Opioids



Sinatra et al. (Pain Study 1)

- Randomized, double-blind, placebo-controlled, single- and repeated-dose 24-h study (n=101). Patients received OFIRMEV 1 g + PCA morphine or placebo + PCA morphine morning following total hip or knee replacement surgery.
- Primary endpoint: pain relief measured on a 5-point verbal scale over 6 h. Morphine rescue was administered as needed.

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