

Opioid Use in Orthopaedic Oncology Patients

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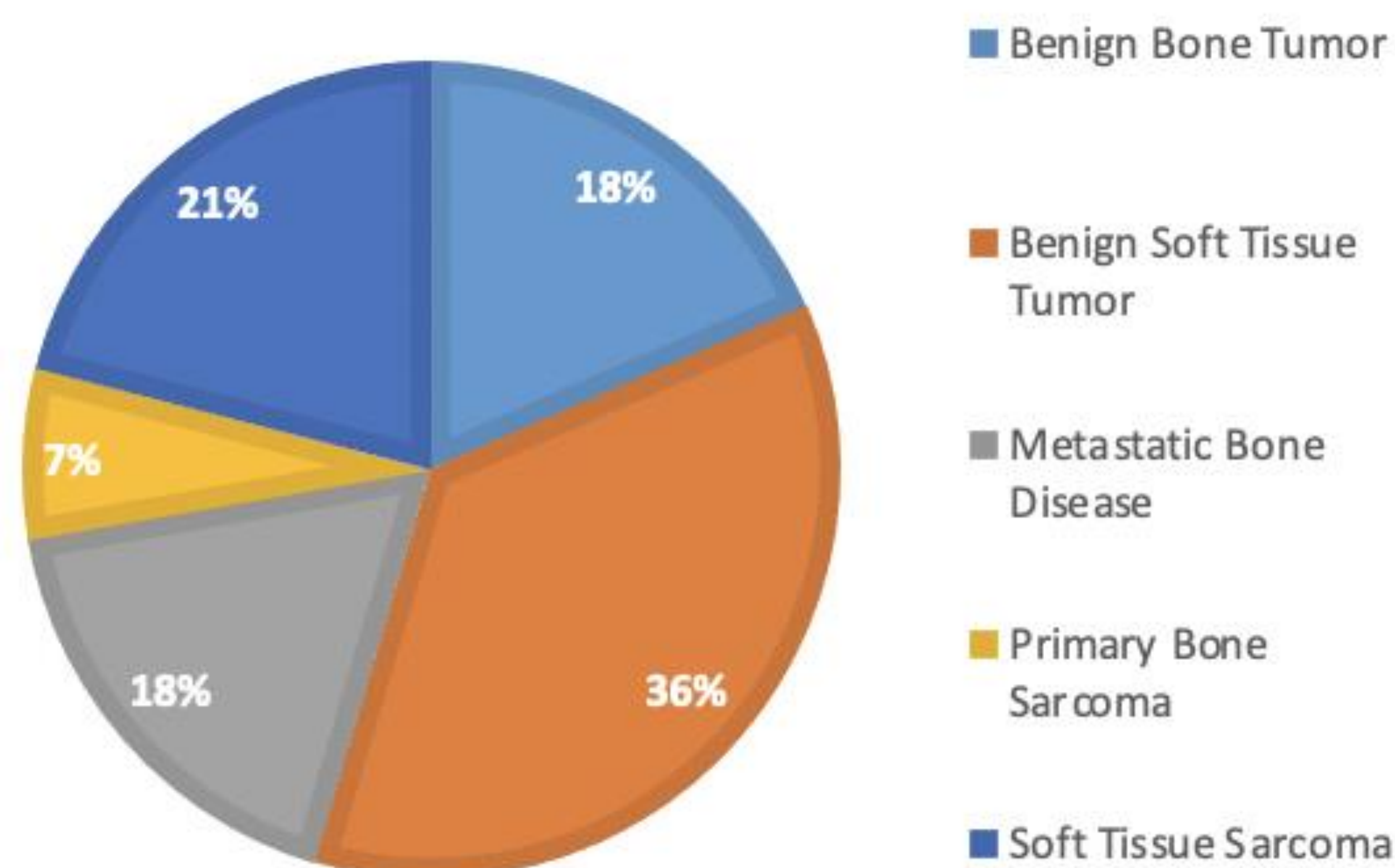
Introduction

- Orthopaedic surgeons are the third most common opioid providers in the United States.
- 50.7% of the oncologic population experience cancer-related pain, which impairs their quality of life.
- The CDC defines chronic opioid use as opioid use on most days for greater than 3 months.
- The purposes of this study was to determine the prevalence of opioid use in orthopaedic oncology patients and to identify factors associated with chronic opioid use postoperatively.
- The study also identified the prescribers of opioids at various perioperative time points.

Methods

- A retrospective review of opioid use amongst 119 orthopaedic oncology patients who underwent surgery for a bone or soft tissue tumor at our institution between November 2017 and August 2018 was conducted.
- The New Jersey Physician Monitoring Program (NJMP), a multi-state online database accessible to opioid prescribers, was utilized to gather prescription data.
- Opioid use was converted to milligram morphine equivalents (MME).

Figure 1: Pathologic Tumor Diagnosis of Study Population



Results

Figure 2: Prevalence of Opioid Use in Orthopaedic Oncology Patients

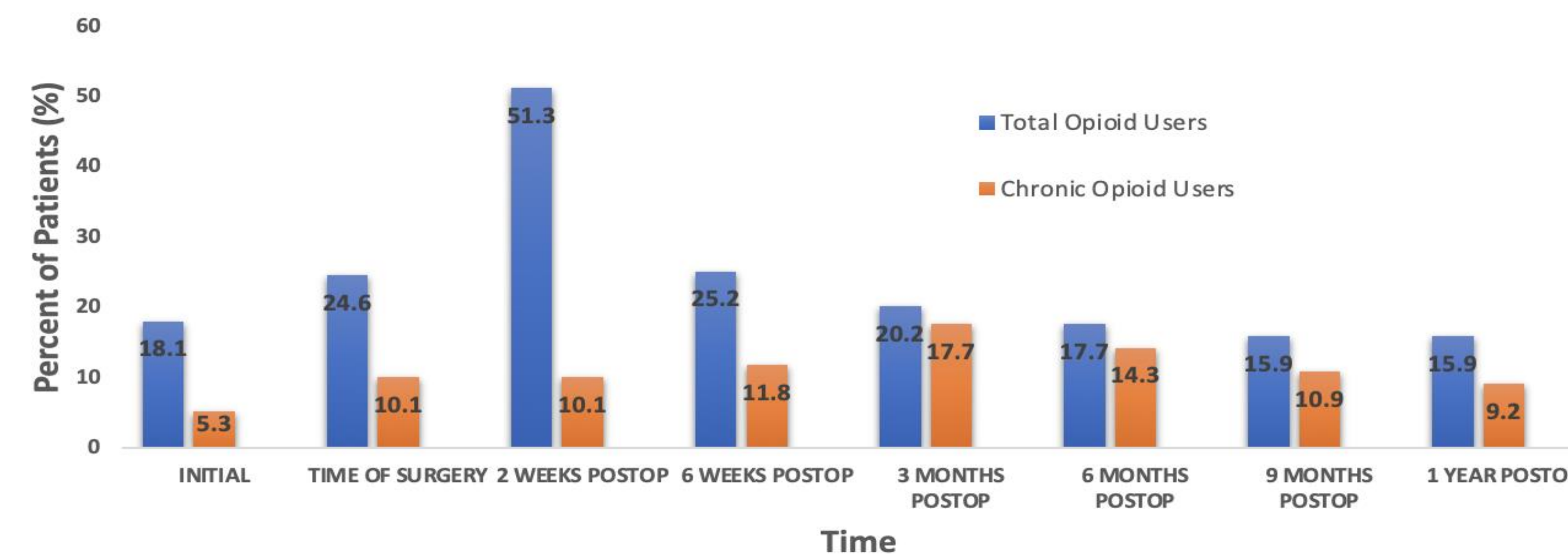


Figure 3: Mean Daily Opioid Consumption

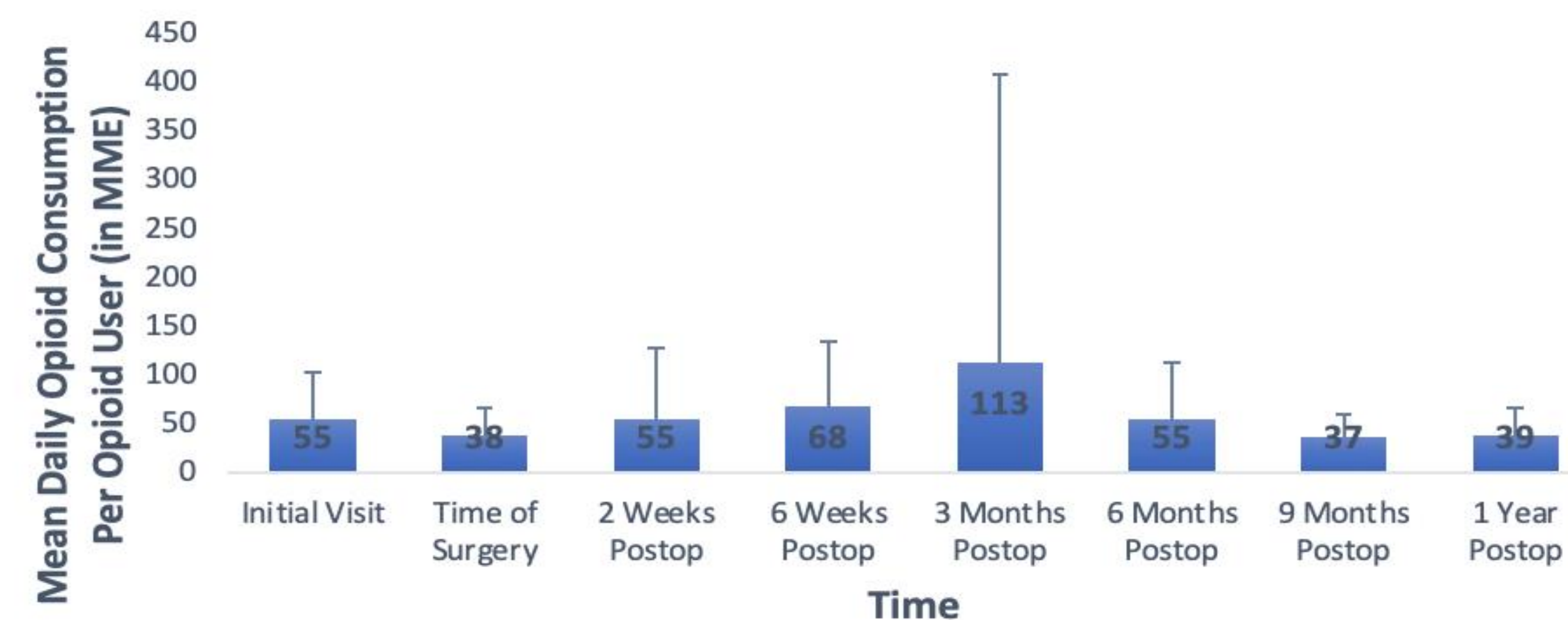
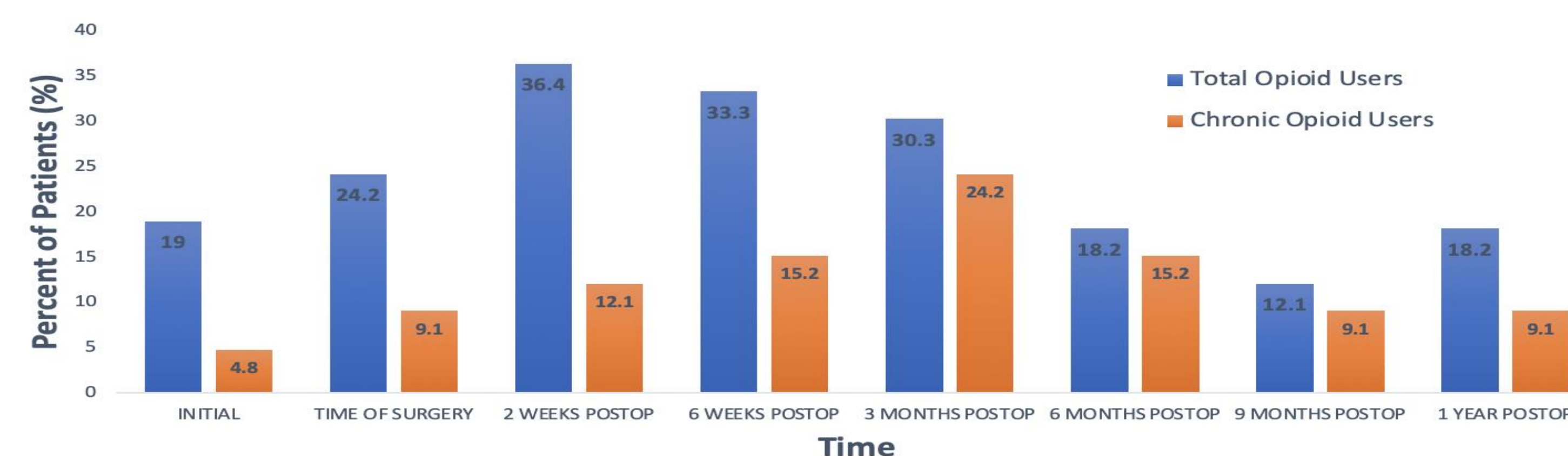


Figure 4: Prevalence of Opioid Use in Sarcoma Patients



Opioid Prescribing Data

- Orthopaedic oncology surgeons prescribed opioids to 50% of opioid users preoperatively.
- At 2 weeks postoperatively, 82.8% of users received their opioids from their orthopaedic surgeon.
- By 1 year postop, 15.2% of opioid users received a prescription from their surgeon.

Results

Factors associated with Chronic Opioid Use Amongst Orthopaedic Oncology Patients

Demographic Variables

- Age, gender, race, body mass index, marital status, and employment status were not associated with chronic postoperative opioid use.

Tumor Characteristics

- **Malignancy** (p=0.01) and **metastatic cancer** (p=0.04) were factors associated with chronic postoperative opioid use.

Medical Factors

- The **Charlson Comorbidity Index** (p=0.02) and **visual analogue pain scores at the initial visit** (p=0.01) were factors associated with chronic postoperative opioid use.

Social Factors

- Smoking, alcohol use, and illicit drug use were not associated with developing chronic opioid use.

- **Preoperative opioid use** (p=0.01), **chronic preoperative opioid use** (p<0.0001) and **continued opioid use at 6 weeks postop** (p<0.0001) were factors associated with developing chronic use.

Multivariate Analysis:

- **Malignancy** (p=0.02) and **visual analogue pain scores at the initial visit** were significant (p=0.02).

Conclusion

- Recent improvement of cancer survival rates has led to more durable and functional outcomes for patients, introducing potential for longer-term opioid use.
- This study found that if a patient is consuming opioids 6 weeks after surgery, they have increased risk of becoming a chronic user. 6 weeks should therefore be utilized as a threshold/“warning sign” for developing a habit of chronic use, especially in a patient who displays other risk factors listed above.
- By gaining a better understand of the factors that can assist in identifying high-risk patients, orthopaedic surgeons can more effectively counsel patients about their risk of postoperative opioid dependency and tailor their prescribing practices. This study is timely in consideration of the opioid epidemic as well as the adverse medical and social effects associated with opioid use.