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Objective & Study Design

Objective
 The purpose of this study is to assess medical cannabis' (MC) efficacy, reported adverse effects (AE), and dosages used in the treatment of patients with Trigeminal Neuralgia (TN).

Method
 A retrospective chart review analysis was conducted on 42 patients that met our inclusion/ exclusion criteria. These subjects were diagnosed with trigeminal neuralgia and were currently being treated with MC through New York State's Medical Marijuana program. Patients were certified and reported to the DENT Neurologic Institute an outpatient neurologic facility in Buffalo, NY for at least one follow-up visit after 1 month on New York State's Medical Marijuana program. Charts were reviewed for patient-reported efficacy, MC dosing, opioid pain medications, and Adverse events (AE's)

Inclusion/ Exclusion	Subjects	Study Population
<ul style="list-style-type: none"> Certified for New York State MC by UCNS board certified physicians or their nurse practitioner/physicians assistant team. Patients were on MC for at least one month treatment At least 21 years of age 	<ul style="list-style-type: none"> 42 patients diagnosed with TN and were certified for MC 76.2% were female, 23.8% were male Patients were excluded due to lack of follow-up or inability to initiate MC treatment The average age was 59.9 years old, between 35 & 86 	<ul style="list-style-type: none"> 42 patients met inclusion criteria and initiated MC treatment Reasons for failure to initiate MC treatment included: <ul style="list-style-type: none"> Financial barriers Employment restrictions

Approved by the Western Institutional Review Board (WIRB)

Results

Figure 1. Study Participants by Sex

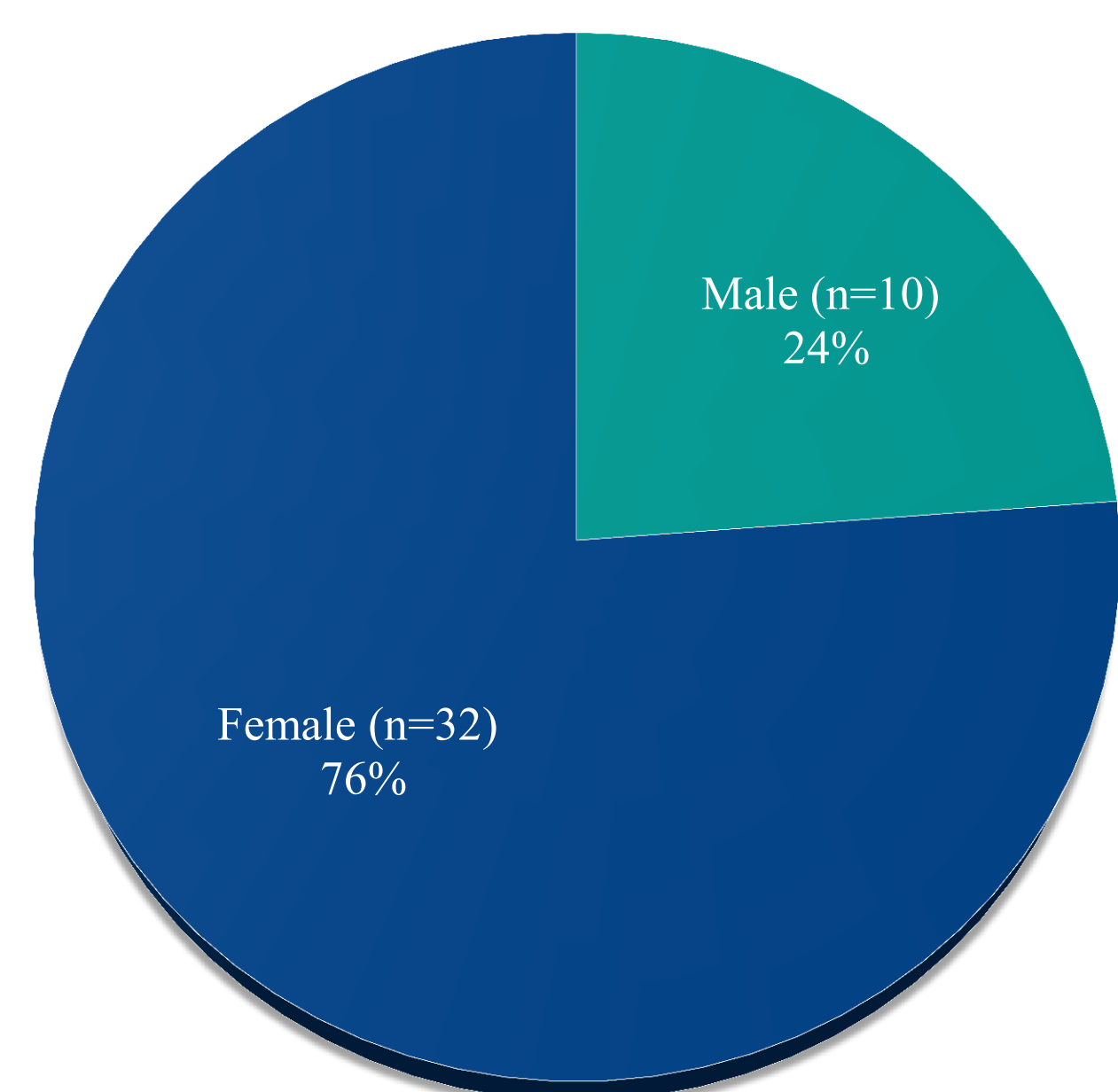
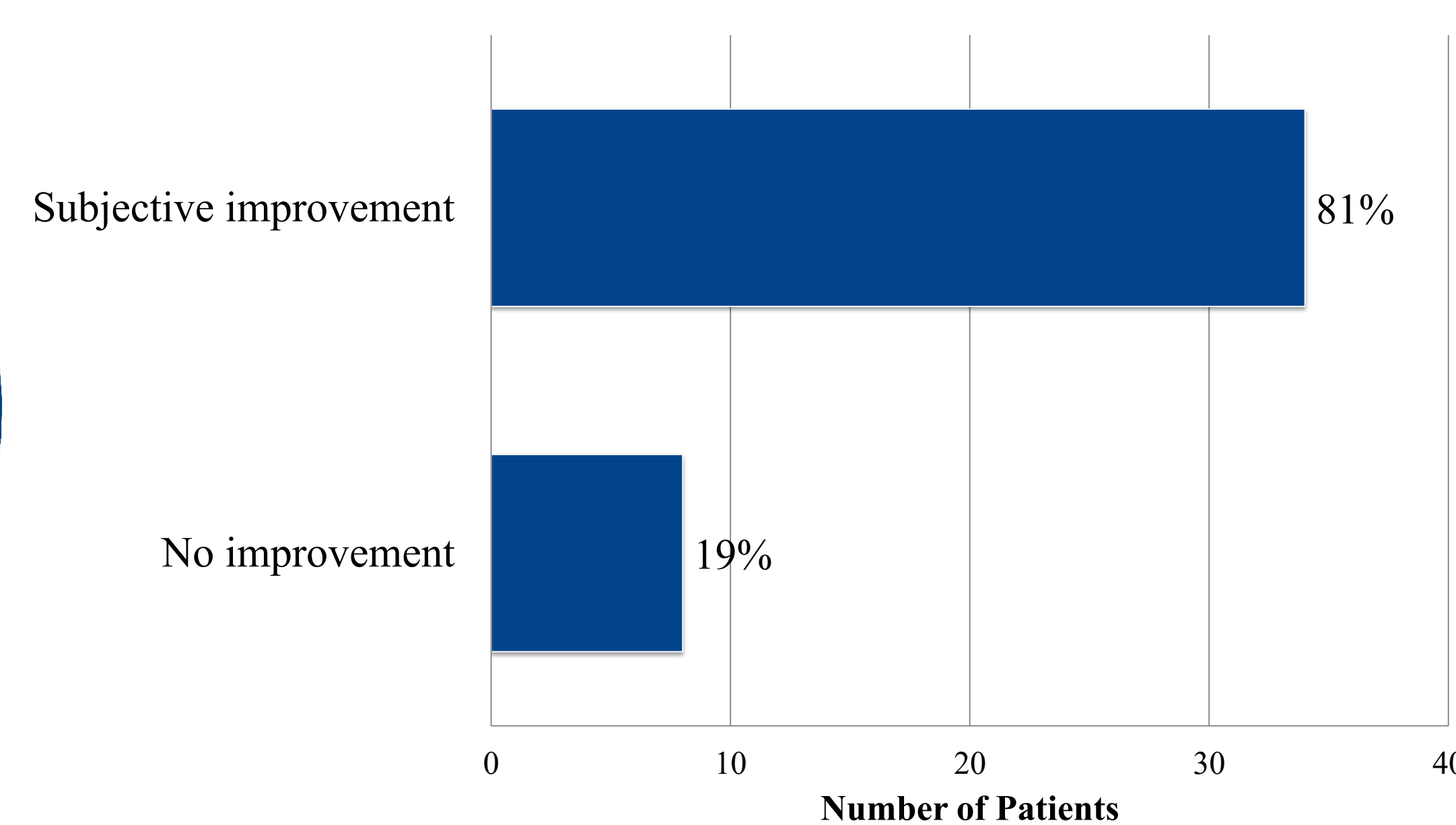


Figure 2. Self-reported improvement



Results

Figure 3. THC:CBD ratios product 1

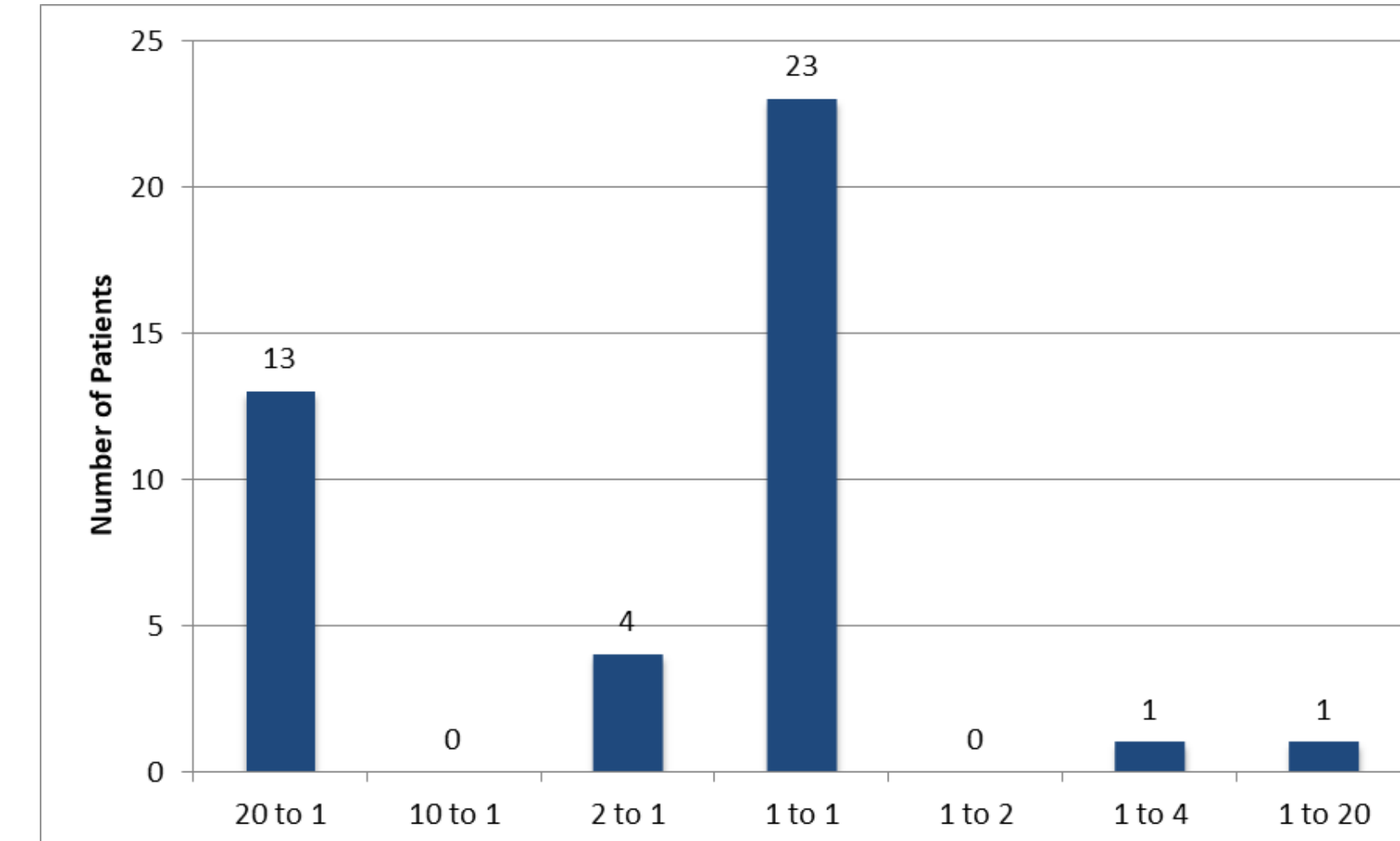


Figure 4. THC:CBD ratios product 2

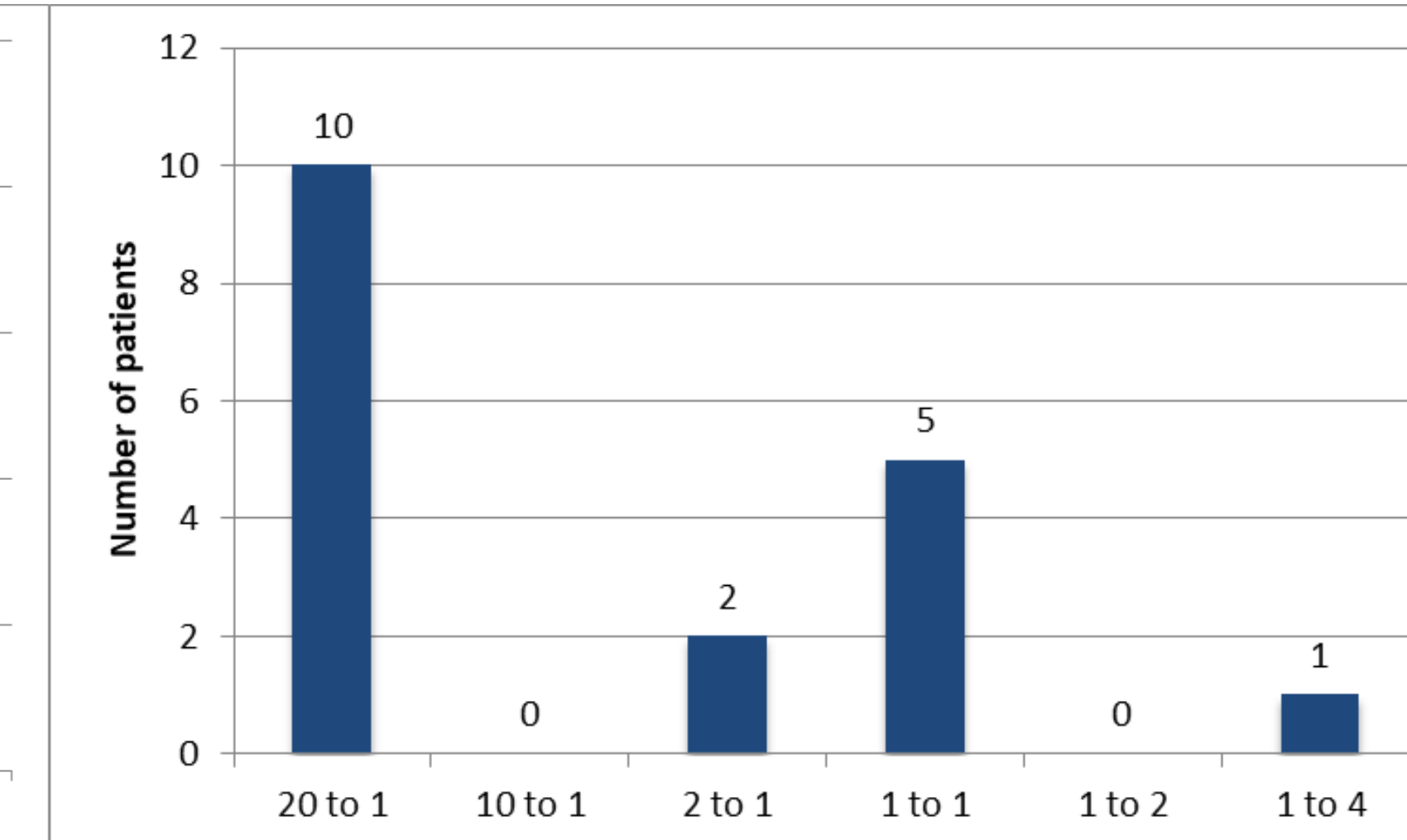


Figure 5. Number of MC products used by patients

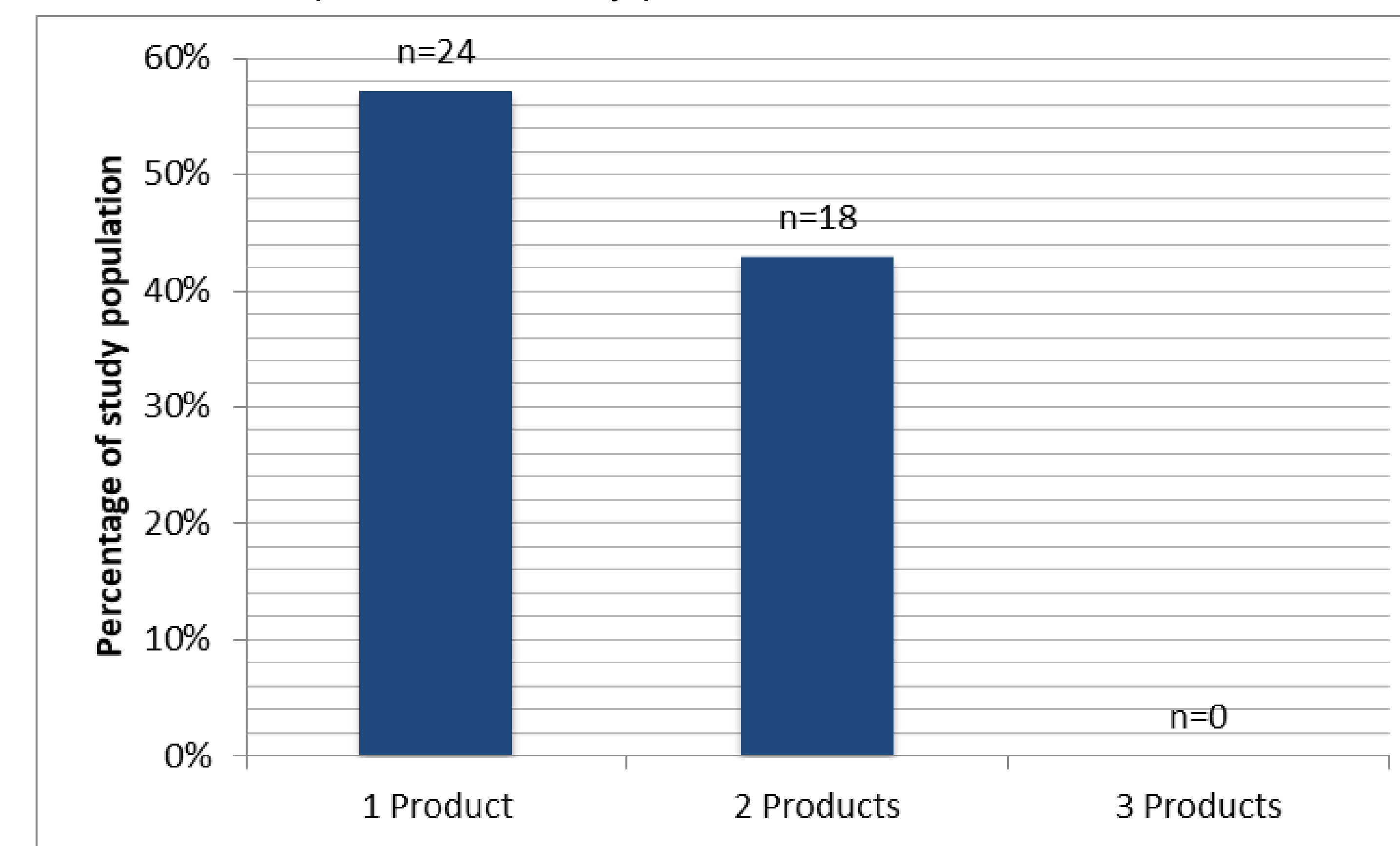


Figure 6. Patient-reported AE(s) profile

Reported side effects	Number of patients
Somnolence	7
Dizziness	2
Cognitive impairment	2
Nausea	2
Dry mouth	2
Other	6
Total number of patients reporting side effects	17
Study population reporting side effect(s)	40%
Number of patients that discontinued MC treatment	1

Discussion

The results of this study suggest UCNS- certified neurologist ought consider incorporating MC into a comprehensive treatment plan for patients diagnosed with TN. An overwhelming majority (81%) of the patients analyzed reported subjective improvement in TN symptoms. Of these patients 69% used only one MC product over the course of treatment the remaining study population used 2 MC products. There was no significant difference in treatment outcomes when comparing use of one product to use of multiple products, similarly no significant difference was found when comparing the three available treatment administration routes: tincture, vaporized inhalation, or capsule. All MC products are obtained by patients, who report an average monthly out-of-pocket cost of \$223.50.

MC has several known mechanism of actions, including inhibition of cyclooxygenase-2 enzyme, increase in serotonin, inhibition of L-type calcium voltage-gated channel, increase in GABA, supplementation for AEA, and prevalence of CB1R within the nervous system. However, the absence of guidelines forces physicians to practice within a large clinical evidence gap or to avoid both risks and benefits associated with MC .

Of patients examined for this study 40% reported AEs most commonly noted as: fatigue, somnolence, nausea, and dizziness. Less than 5% of study subjects elected to discontinue MC treatment as a result of an AE, thus indicated MC is largely tolerated by subjects, additionally no serious AEs were reported. MC treatment research towards providing practical and realistic prescribing information to patients currently on or considering MC.

Conclusion

This study finds that MC is well tolerated in the treatment of Trigeminal Neuralgia, with the vast majority of patients reporting improvement of symptoms. This study also found that the most common efficacious dosage for these patients is a 1:1 ratio of THC to CBD, and that almost half of patients using opioids were able to reduce their opioid consumption using Medical Cannabis. These results suggest that Medical Cannabis is a useful part of a comprehensive pain management plan for patients with trigeminal neuralgia, but future randomized placebo controlled trials are required.

Acknowledgements & References

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Author Disclosures:
 Dr. Mechtler: Speaker for Allergan, Amgen, Avanir, Promius, and Teva
 All other authors report no disclosures.