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SAN FRANCISCO

SUPPORTIVE CARE MAKES EXCELLENT CANCER CARE POSSIBLE

Prophylactic Gabapentin in HNC

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Conflict of Interest Disclosure

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Has no real or apparent

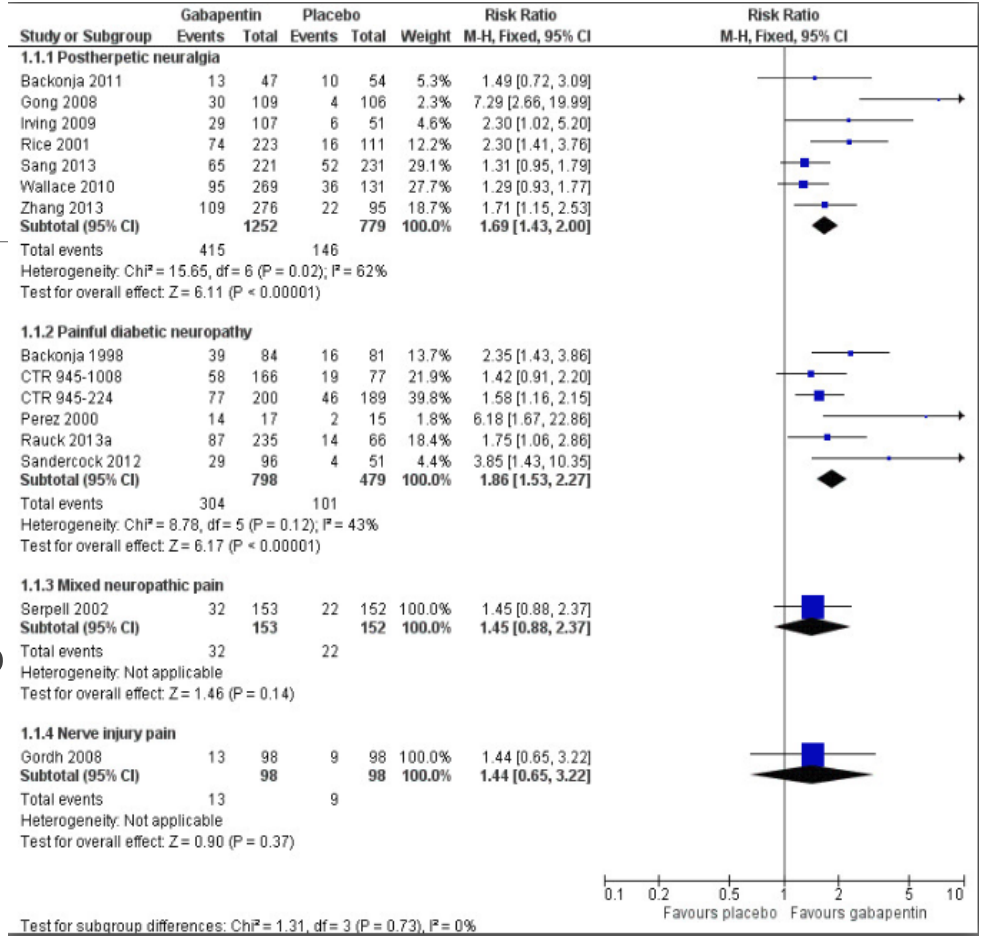
conflicts of interest to report.

Background

Gabapentin has been used in many settings for the treatment of pain and associated systemic symptoms

Retrospective reports indicate that prophylactic gabapentin during chemoradiation may decrease frequency and severity of pain

We undertook a randomized trial to confirm benefit in head and neck cancer patients undergoing chemoradiation.



Wiffen PJ, Derry S, Bell RF, Rice ASC, Tölle T, Phillips T, Moore R. Gabapentin for chronic neuropathic pain in adults. Cochrane Database of Systematic Reviews 2017, Issue 6. Art. No.: CD007938. DOI: 10.1002/14651858.CD007938.pub4

Trial Design:

Patient population:

- Biopsy proven cancer involving the larynx, pharynx, oral cavity, paranasal sinuses or salivary gland
- Planned for either definitive or adjuvant chemoradiation
- Minimum of T2N0M0

Randomization:

- Arm 1: Standard of care (SOC) supportive measures exclusive of gabapentin until completion of radiation
- Arm 2: SOC PLUS **prophylactic** gabapentin starting day 1 of radiation with escalation as tolerated
  - Week 1: 100 mg po tid Week 2: 300 mg po tid
  - Week 3: 600 mg po tid Week 4: 900 mg po tid

Specific Aims:

Primary Aim:

- To determine whether **prophylactic** gabapentin can reduce the incidence and/or severity of pain in patients undergoing chemoradiation
- Measure: VHNSS v2 pain score

Secondary Aims:

- To determine whether **prophylactic** gabapentin can reduce the incidence and/or severity of systemic symptoms associated with chemoradiation
  - Examples: fatigue, sleep, neurocognitive changes, anxiety and depression
- To determine whether **prophylactic** gabapentin can reduce the incidence and/or severity of local symptoms associated with chemoradiation
  - Examples: Swallow function, mucosal burning and or sensitivity, smell and taste

Statistical Considerations:

Planned Enrollment:

- Planned accrual goal: 125 patients
- Planned interim analysis when 75 patients had completed the study

Interim Analysis: (n=79, enrolled)

- Positive for primary and secondary endpoints
- Study closed to accrual

Statistical Methods:

- Items were divided into subscales as defined as in Cooperstein et al. which developed the VHNSS 2.0
- First non-negative principle component used as subscale score
- All analyses performed using ordinal logistic regression (proportional odds model)

Patient Characteristics:

Characteristic	Control	Gabapentin	P-value
Gender - Male	67.7%	58.47%	0.70
Age – Median	57.3 yrs	58.5 yrs	0.95
Stage T			0.13
Stage N			0.26
Pre-treatment weight	93.2 KG	88.8 KG	0.48
P16 Status (tested routinely only in OPC)	83.3%	80.8%	1.0
Surgery	24.2%	19.5%	0.836

Toxicity:

Severe Adverse Events:

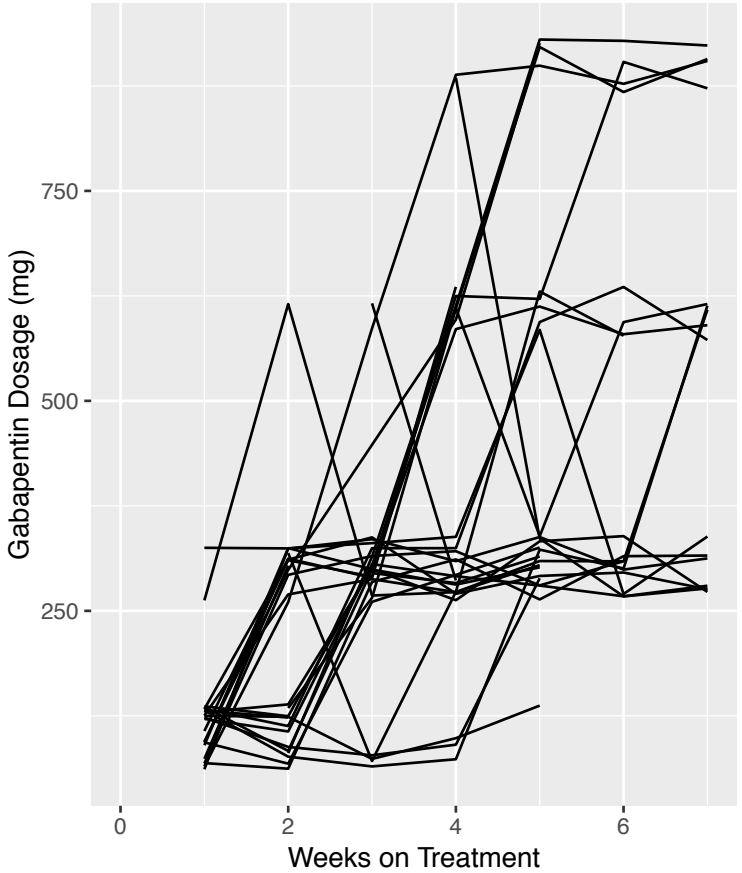
- None

Titration:

- Most patients on the treatment arm stayed at the 300mg tid dosage
- Major side effect preventing upward titration: fatigue and sedation

Withdrawals:

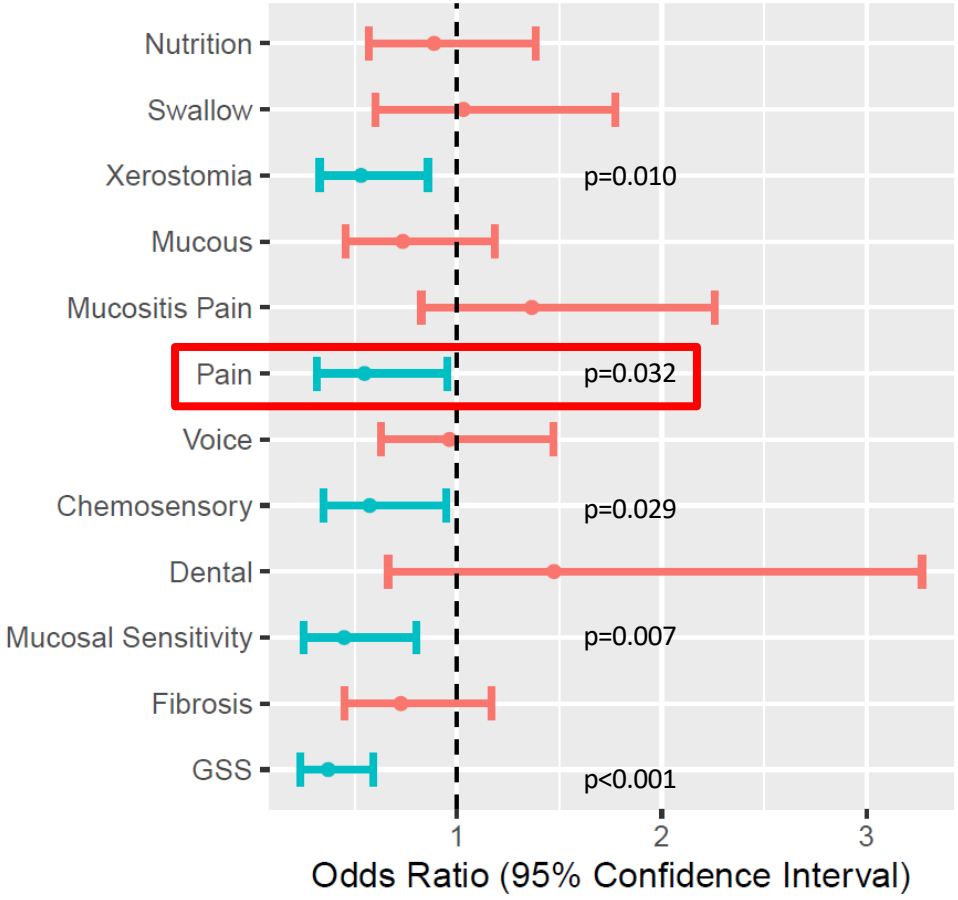
- 6 patients either withdrew or were withdrawn from the study (4 Control, 2 Treatment)
- Most withdraws were prior to the baseline visit and initiation of drug
- Only 1 patient withdrew mid-study due to drowsiness



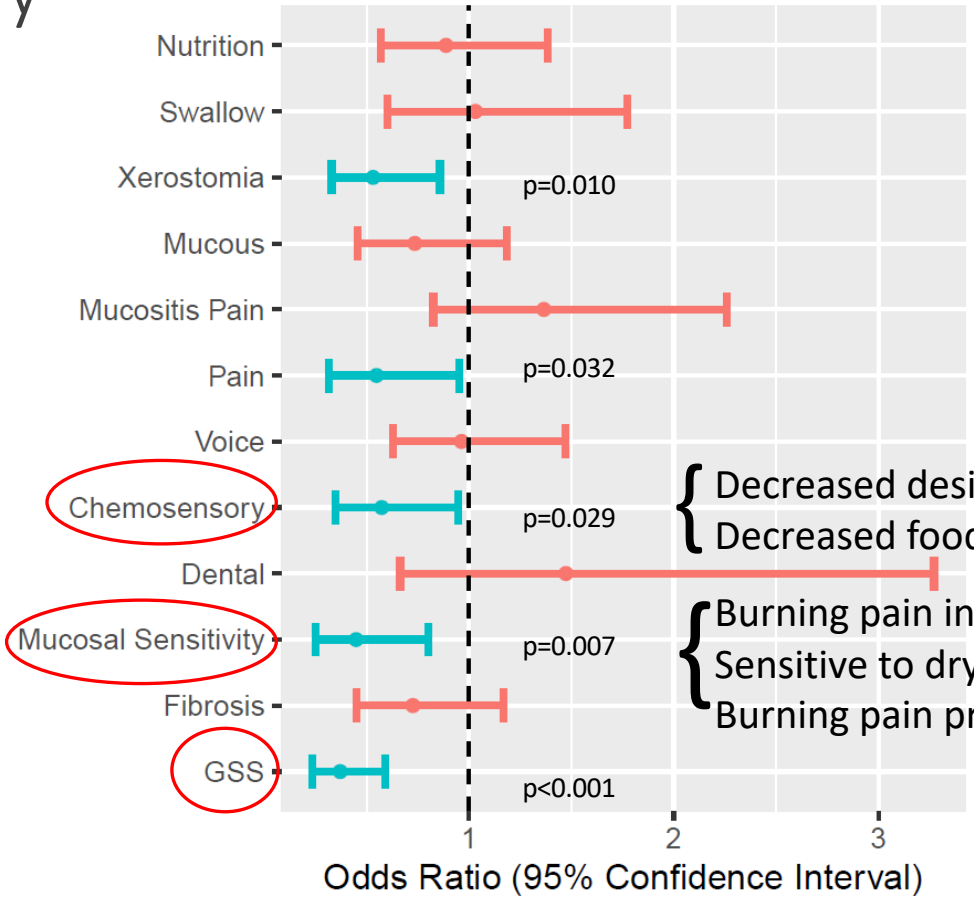
Primary Aim:

Items:

- Average pain
- Worst pain
- Pain relief
- Pain causing difficulty sleeping



Secondary Aims:

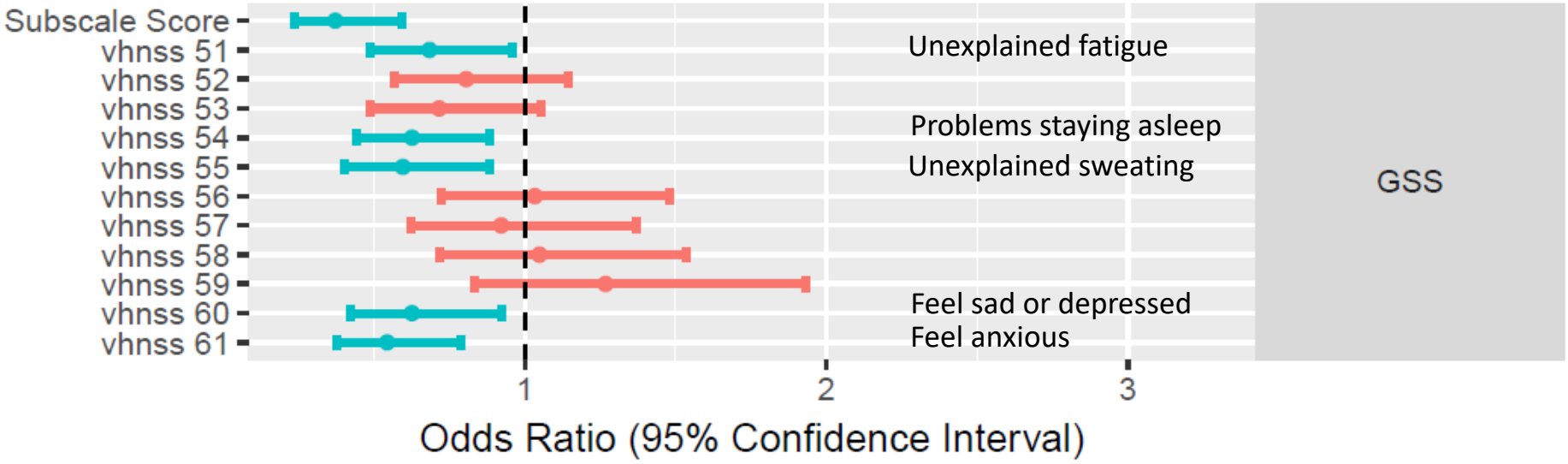


Decreased desire to eat
Decreased food eaten

Burning pain in lining of throat*
Sensitive to dryness*
Burning pain prevents tooth brushing

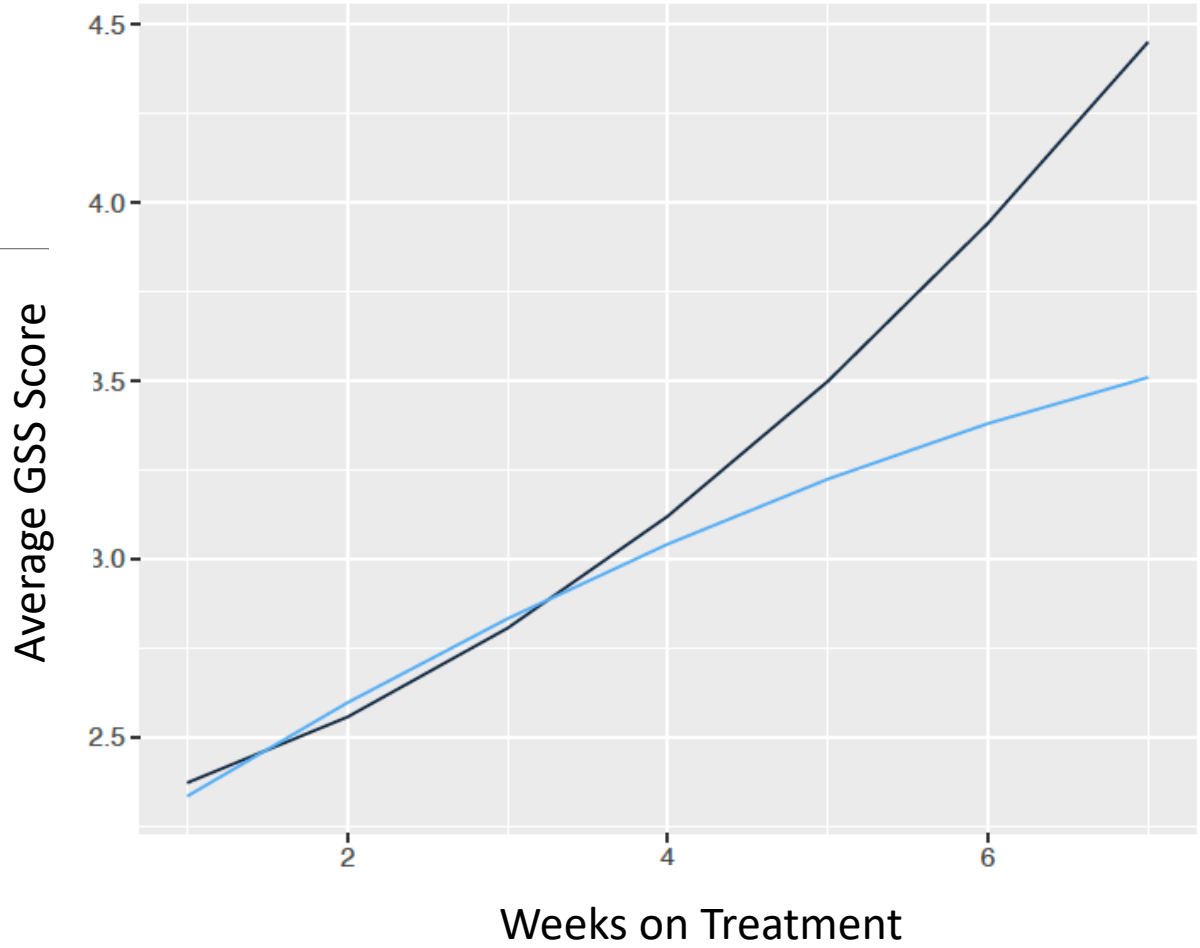
* marginal significance

Secondary Aim: General Symptoms



Temporal Changes

Difference between the average symptom trajectory of patients on SOC (black) vs. SOC+gabapentin (blue) over the course of therapy.



Strengths and Limitations:

Strengths:

- Measurement tools were developed specifically for head and neck cancer patients
- Items were carefully designed to capture the symptom experience of this population
- Symptoms were captured weekly

Weaknesses:

- The trial was not placebo controlled. There is a known placebo effect in trials assessing efficacy of pharmaceutical and non-pharmaceutical intervention for the treatment of pain. Whether this is true for prophylactic interventions is unknown.
- This was a single institutional study with all of the associated limitations thereof.

Conclusions:

Prophylactic use of gabapentin decreased the development and/or severity of pain in HNC patients undergoing chemoradiation compared to standard supportive care.

Prophylactic use of gabapentin decreased the development and/or severity of general systemic symptoms in HNC patients undergoing chemoradiation compared to standard supportive care.

Prophylactic use of gabapentin decreased the development and/or severity of neurosensory symptoms in HNC patients undergoing chemoradiation compared to standard supportive care.

Questions?