Please confirm that an ethics committee approval has been applied for or granted: Yes: I’m uploading the Ethics Committee Approval as a PDF file with this abstract submission

**Background and Aims** Back pain is a very common pathology in Chronic Pain Units, often induced by lumbar disc herniation. Different therapeutic interventions have been studied, being conservative measures first-line treatment. Oxygen-ozone injections are becoming more common as an alternative therapy but its efficacy in terms of pain relief and functional improvement is uncertain. Even though it is considered a minimally invasive technique, potential complications such as hematoma, local infections or nerve irritation, have been described.

**Methods** We present a case of a patient who suffered a posterior reversible encephalopathy syndrome (PRES) secondary to a subarachnoid embolism after oxygen-ozone injections, a side effect non-previous reported in the literature.

**Results** 83-year-old woman, with general arthrosis and chronic back pain secondary to herniated disc, electively submitted to oxygen-ozone intradiscal injection in an outpatient clinic. Immediately after the injection, she suffered a sudden decrease of consciousness and was transferred to our hospital. She presented a Glasgow Score of 8, global aphasia, right oculocephalic deviation, right upper extremity claudication and bilateral babinski sign. An AngioCT scan showed two air bubbles in subarachnoid sulci of the left frontal and parietal lateral convexity with subcutaneous emphysema. She was intubated, transferred to ICU and received two hours of hyperbaric therapy. Magnetic resonance showed probable PRES secondary to oxygen-ozone encephalic embolism. Afterwards, she could be extubated with no neurological sequelae.

**Conclusions** Oxygen-ozone injections as intradiscal therapies, have multiple associated complications that must be taken into account when assessing risks and benefits. Further studies are needed to evaluate outcomes and associated complications.

**Attachment** Consent.pdf
BARIATRIC PRE-OPERATIVE PAIN OPTIMISATION PATHWAY: A PROSPECTIVE OBSERVATIONAL STUDY

Background and Aims There is published discrepancy in peri-operative outcomes between pre-operative users of strong opioids, and non-users. However, there is a paucity of research assessing the effect of optimising pain management pre-operatively, in patients undergoing bariatric surgery. This study assessed if a novel pre-operative referral pathway for high-risk complex chronic pain patients using strong opioids improves outcomes following weight-reduction surgery.

Methods Patients with chronic pain and strong opioid use awaiting weight-loss surgery were identified by a Bariatric Specialist Nurse, referred to the Plymouth Pain Management Service, and were reviewed by a Consultant in Pain Medicine.

Results Three patients achieved a successful reduction in use of strong opioids; both at hospital discharge and 24-hour post-operative use in these patients. There was no difference in length of hospital in-patient stay between the high-risk chronic pain patient group and the standard patient cohort. A patient feedback questionnaire suggested improved education and understanding of what chronic pain is, a greater awareness of the side effects of opioids, and a positive impact on mental health.

Conclusions Currently only a select few high-risk chronic pain patients have completed the pain pre-operative optimisation pathway. This approach improves patients’ knowledge and understanding of pain management and reduces their chronic use of strong opioids. Further work is needed with increased patient numbers to provide greater insights into how this process could be optimised to provide a better service to patients undergoing weight-loss surgery who suffer with significant chronic pain.

EXPLORING ALTERNATIVES FOLLOWING SPINAL CORD STIMULATION IMPLANTATION FAILURE

Background and Aims Dorsal Root Ganglion (DRG) neurons play a vital role in transmitting pain signals to the central nervous system, acting as a filter for afferent signals to the dorsal horn. Dorsal root ganglion stimulation (DRG-S) is a specialized neuromodulation therapy that targets the dorsal root ganglion, offering analgesic benefits for various chronic pain conditions. In recent years, DRG-S has gained popularity as a treatment option for lower extremity neuropathic pain syndromes.

Methods Case Report: This case study involves a 30-year-old male with a history of neuropathic symptoms who experienced moderate to severe pain following low-grade myxofibrosarcoma resection in his left thigh at the age of 13. Despite undergoing several interventional procedures such as peripheral nerve blocks, spinal cord stimulation (SCS), and peripheral nerve stimulation implants, he achieved unsatisfactory results. Consequently, the patient was scheduled for a ganglion root stimulation implant.

Results DRG-S enables precise targeting of nerve fibers that innervate specific painful regions without indiscriminately activating uninvolved dermatomes. With a thin layer of cerebrospinal fluid surrounding it, the DRG allows for the achievement of stimulation with lower electrical currents and is less affected by positional changes. The mechanism of analgesia through DRG-S involves reversing the central pathophysiological changes within the DRG neurons that perpetuate and amplify neuropathic pain.

Abstract #36492 Figure 1 DGR XRay

Conclusions Chronic neuropathic pain is a prevalent condition that significantly impacts quality of life. When other neuromodulatory therapies have failed, DRG-S can offer potential advantages for managing lower extremity neuropathic pain syndromes. References: Adv Ther (2022) 39:4440–4473