

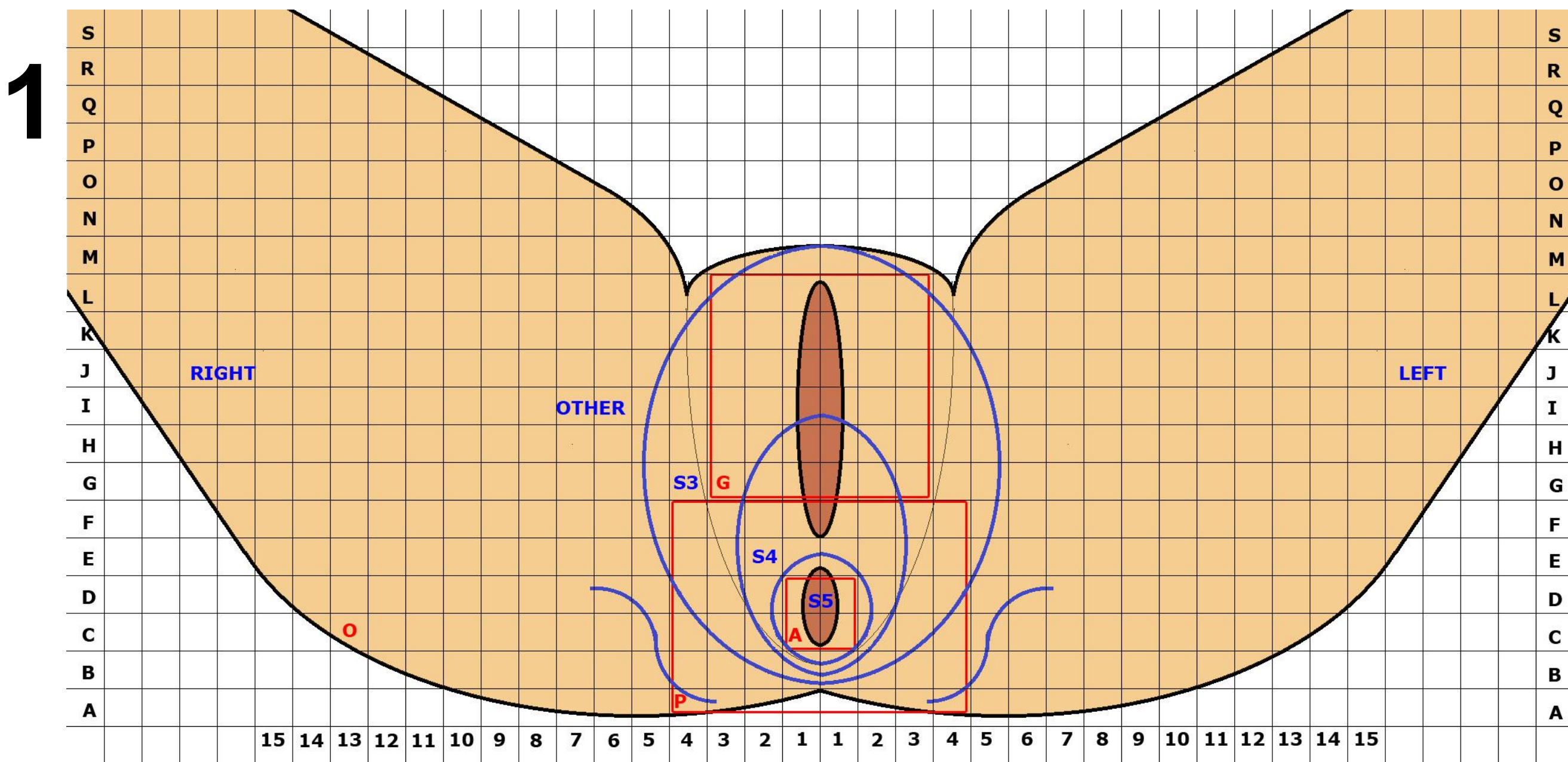
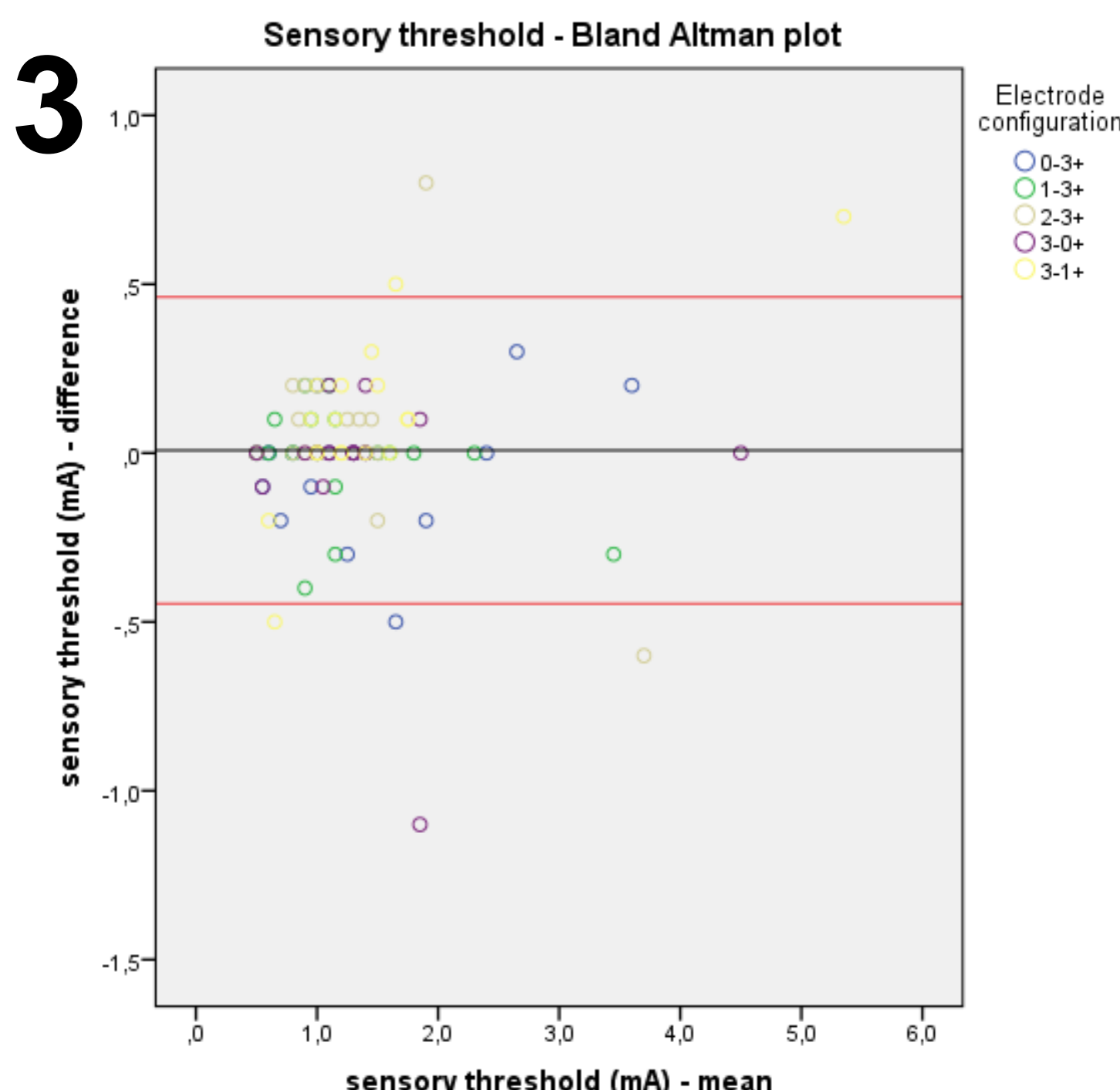
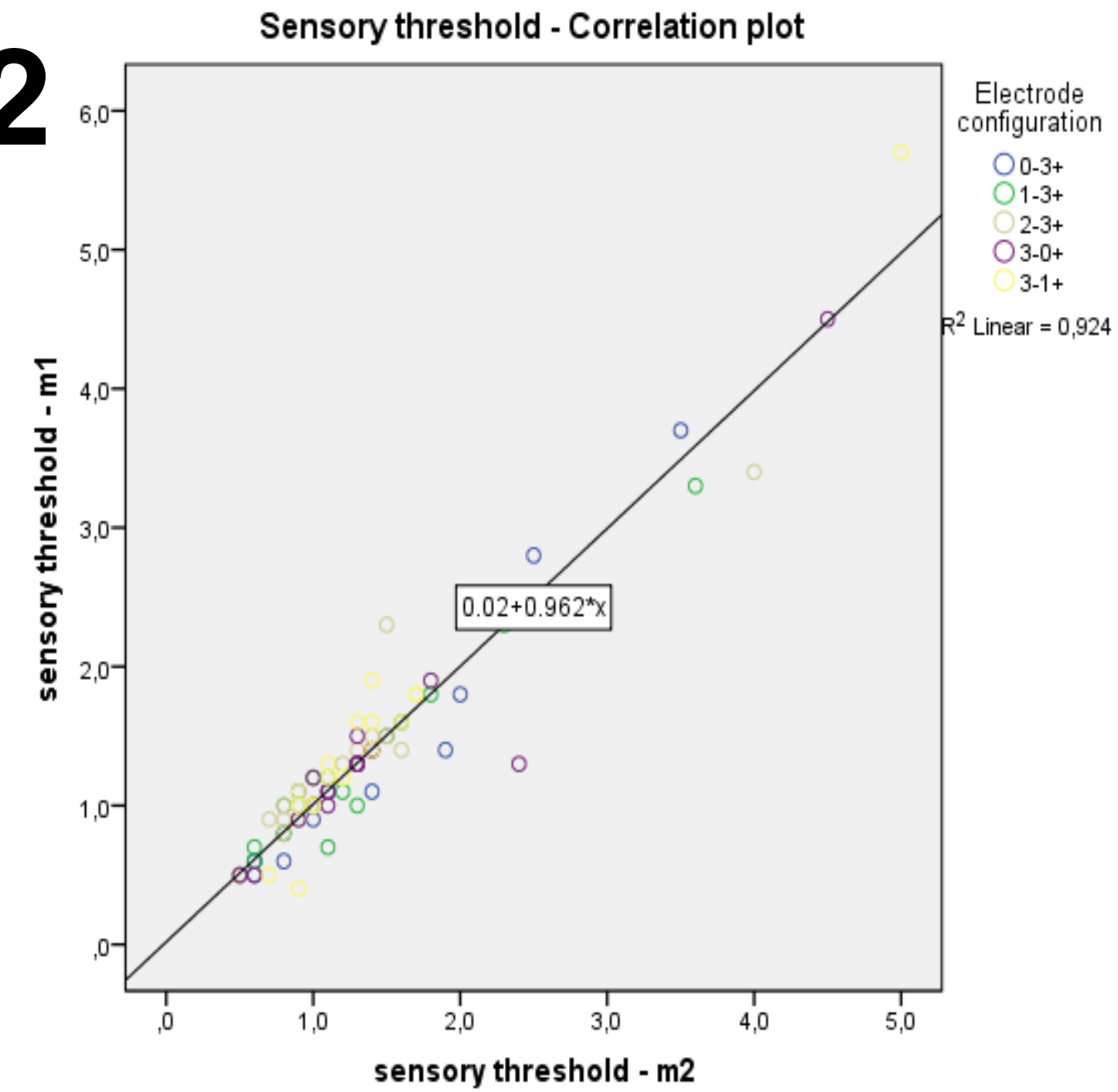
# #509: The use of a sensory passport on different parameter settings during the sacral neuromodulation procedure

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### Hypothesis / aims of study

- SNM treatment consists out of stimulating lead electrodes in proximity of the sacral roots
- Which lead electrodes are stimulated is determined by the clinician
- Optimal sacral root stimulating is determined by the location where the patients feel the stimulation and the sensory threshold (=sensory response)
- In general the location of sensation is assessed by verbal description
- This study assesses the test-retest reliability of the sensory threshold and a pelvic chart, to assess the location of sensation

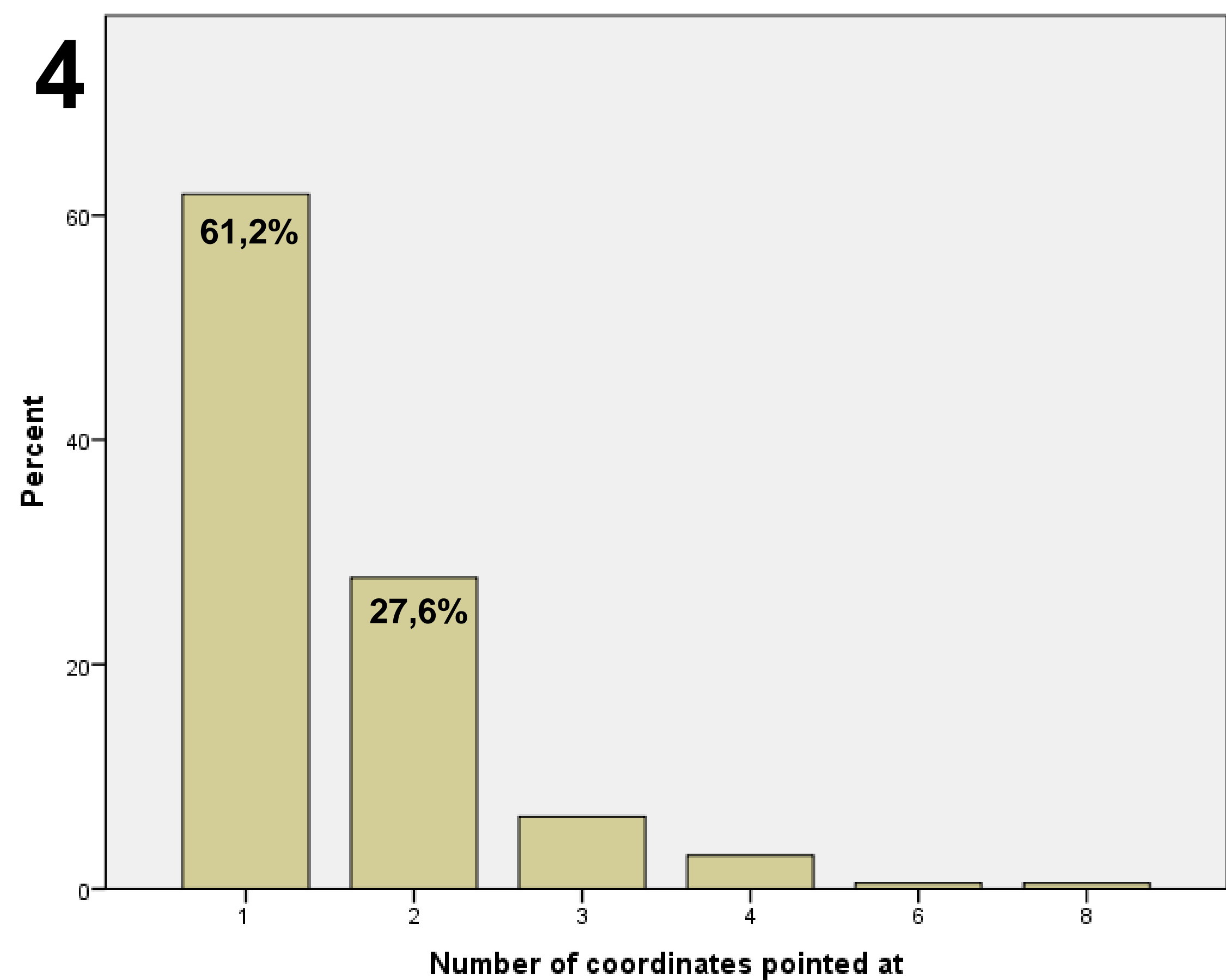


### Study design, materials and methods

- Single tertiary center, prospective study (December 2017 - March 2018)
- Patients with OAB or NOUR, eligible for SNM
- To map the sensory responses a pelvic dermatome chart was developed with 1cm<sup>2</sup> squares with coordinates [fig 1]
- Stimulation (210μs, 14Hz) until sensory threshold of electrode settings: 0-3+/1-3+/2-3+/3-0+/3-1+
- Each coordinate corresponds with a location: “perianal”, “genital” or “other” (leg, toe, lower back)
- Procedure was done twice with 10 minutes interval

### Results

- 18 consecutive patients were included (age: 57,3 +/- 14,9 years, gender: 89% females, indications: OAB: 89%)
- Sensory threshold
  - Intraclass correlation coefficient showed excellent test-retest reliability (0,954: 95% CI: 0,936-0,967 | p<0,001)
  - Correlation plot showed a strong positive correlation between measurements ( $r^2 = 0.924$ ,  $p < 0.001$ ) [fig 2]
  - Bland-Altman plot showed narrow 95% limits of agreement, including 92% (83/90) of the data [fig 3]
- Location of sensation
  - All patients found it easy to mark specific spots on the pelvic chart
  - In 90% the location of sensation could be described by 1 or 2 coordinates [fig 4]
  - Cohen’s kappa coefficient shows an almost perfect agreement between measurements ( $p < 0.001$ ,  $(\kappa) = 0.79$ ) [fig 5]

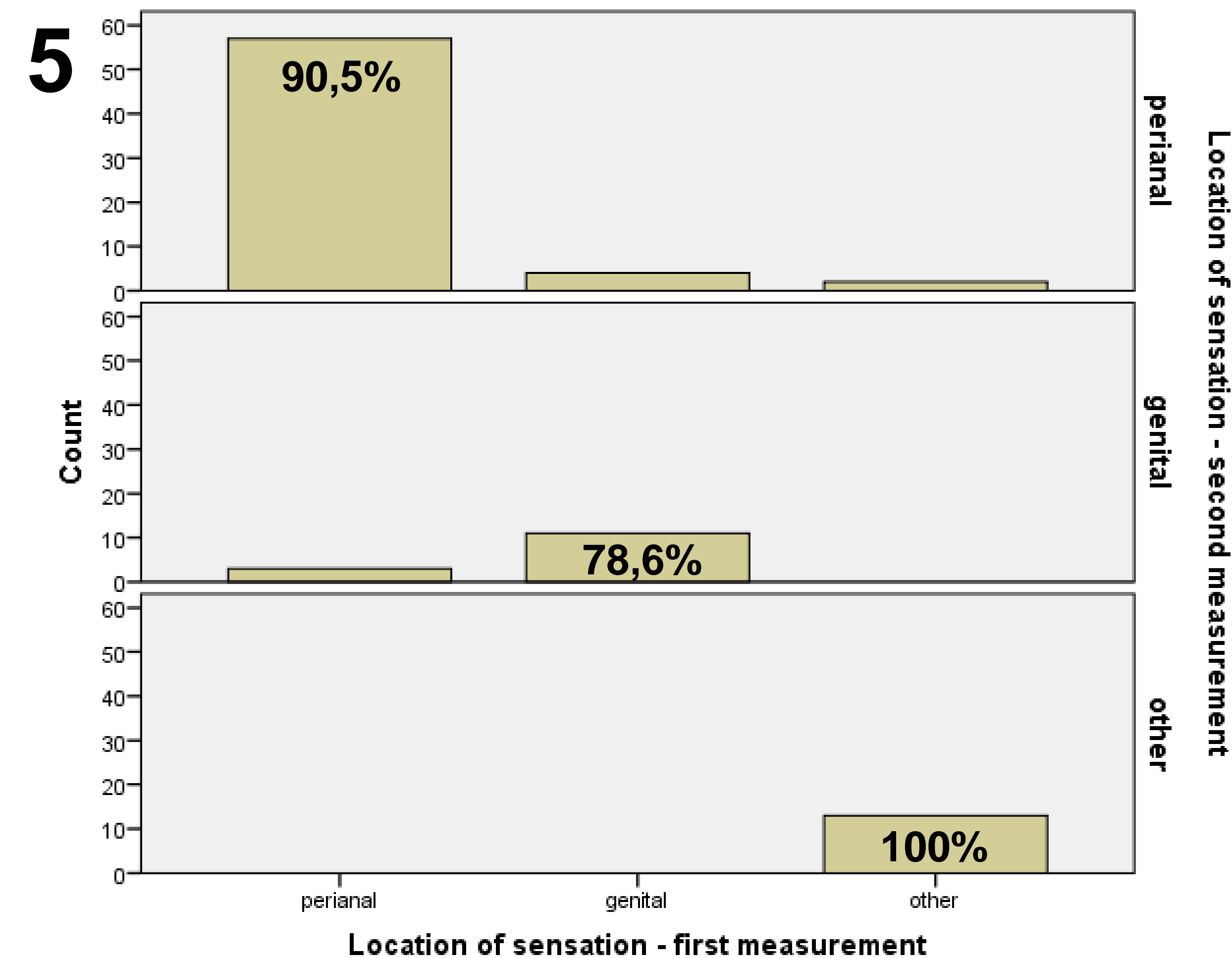


### Interpretation of results

- A nearly perfect correlation for the ST and an almost perfect agreement for the location of sensation was seen
- Therefore the sensory responses upon stimulation of the different electrode configuration during programming is repeatable

### Concluding message

- The use of dermatome chart with coordinates at which the patients mark the place where they feel electrical stimulation on sacral neuromodulation is a reliable tool
- The use of this “sensory passport” is advised to record as baseline document for patients started on sacral neuromodulation as it can be used in set up and troubleshooting sessions



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