Background
Understanding which pain mechanisms underlie patients' symptoms is relevant to select the most appropriate intervention for people suffering from musculoskeletal pain. Nociceptive pain typically presents with a local pain distribution in the injured area in contrast to an expanded pain distribution, which is characteristic of dominant central pain mechanisms. Pain drawings can be useful to record the distribution of pain and thus inform about the underlying pain mechanisms.

Purpose
To investigate the distribution of pain in people with frozen shoulder contracture syndrome (FSCS) and to examine the association between the extent of pain and pain intensity, pain catastrophizing, and scores on the Central Sensitization Inventory.

Methods
Forty-eight people with FSCS participated in this study. They completed a pain drawing using a digital tablet and recorded their current pain intensity. They also completed the following self-report questionnaires: Shoulder Pain and Disability Index, Pain Catastrophizing Scale, Pain Vigilance and Awareness Questionnaire, Central Sensitization Inventory. Pain extent and pain location were computed using the Margolis rating scale (Figure 1). Spearman’s correlation coefficients were performed to reveal possible correlations between the pain extent and the questionnaires.

Results
All patients reported pain in the anterior shoulder region (Figure 2). A significant percentage reported pain in adjacent regions such as the scapular region (72.9%), the anterior portion of the arm (87.5%) and the posterior neck region (54.2%). Significant positive correlations were observed between pain extent and pain intensity, pain catastrophizing and central sensitization (Table 1).

Conclusion
In patients with frozen shoulder, pain is mainly reported in the shoulder region suggesting a nociceptive pain mechanism. The positive correlation with central sensitization and pain catastrophizing suggests that in patients with widespread pain, a central pain mechanism can also occur.

Clinical Implications
Pain drawings can help clinicians to determine pain mechanisms in the evaluation of patients with chronic musculoskeletal pain.

Contact details
Email: marco.barbero@supsi.ch

REFERENCES: