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Inter-tester reliability in the diagnostics of patients with shoulder complaints

Diagnostic agreement of shoulder complaints in a primary health care setting

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Background

- Neck, shoulder and arm complaints causes some 10 % of sickness absence in Norway
- Shoulder pains rarely resolve quickly or completely
- Very few physical examination tests of the shoulder *appear to be* diagnostically discriminatory [Hegedus EJ, Goode AP, Cook CE, et al: *British journal of sports medicine* 2012, **46**(14):964-978].
- Standardized length of sick leave?

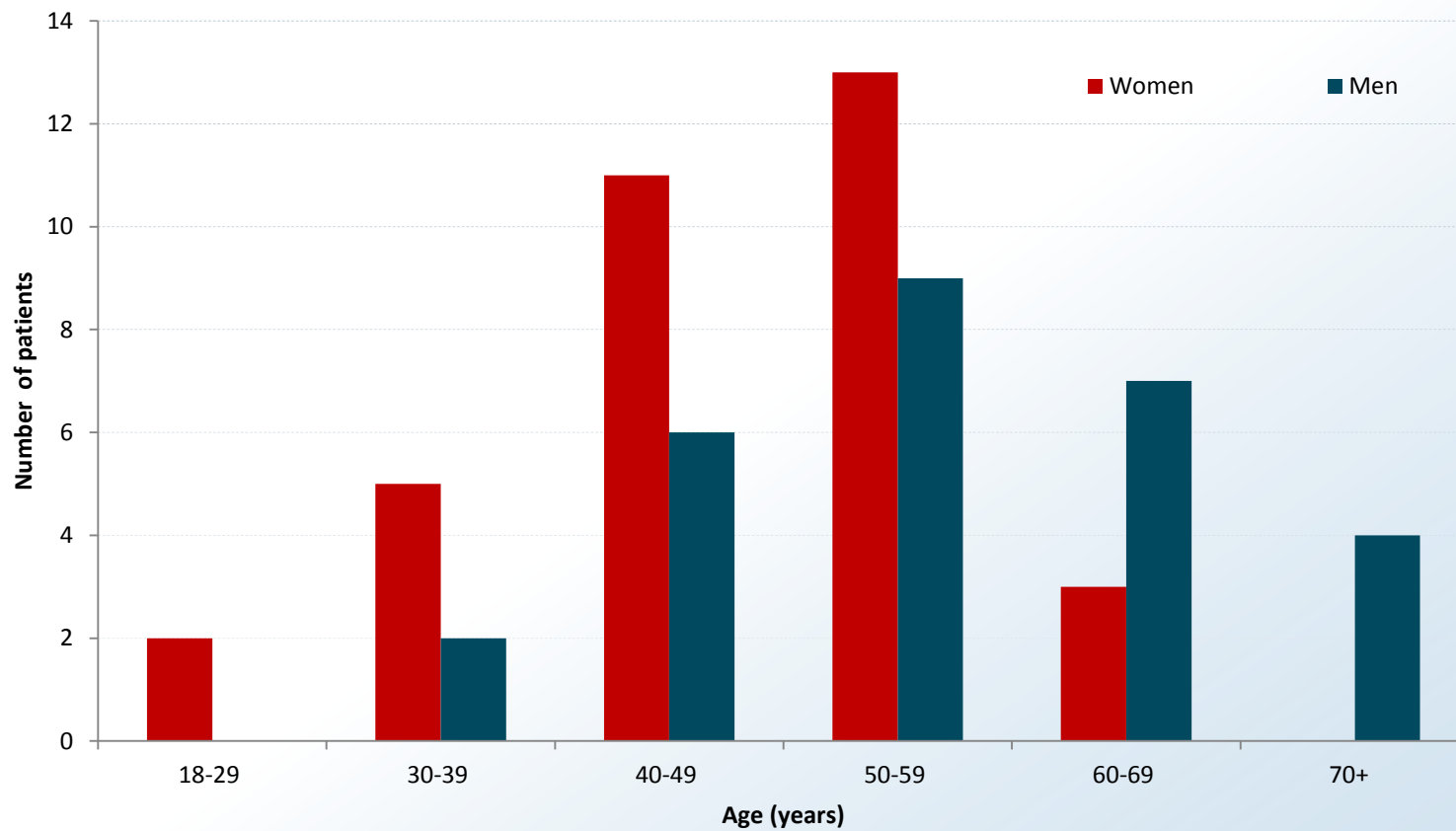
Purpose of the study:

- The aim of this study was to investigate
- the diagnostic accuracy of shoulder complaints
- using selective tissue tension techniques (STT)
- in a systematic approach according to orthopaedic medicine (Cyriax)
- In a primary health care setting

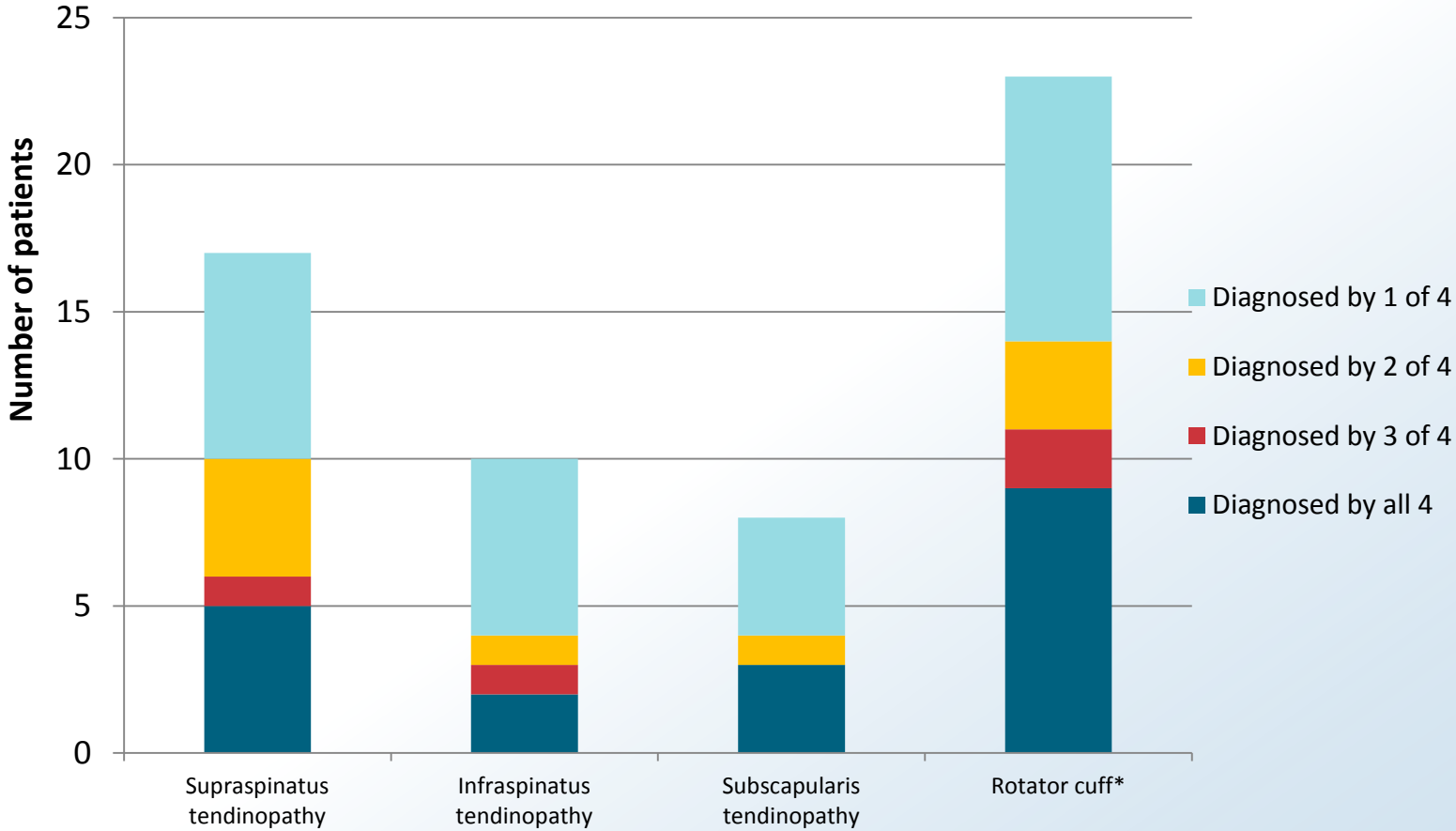
Methods

- 62 patients, 34 females and 28 males aged 18 to 75 years from Nordland county in Northern Norway.
- Anamnestic interview
- Then all patients were individually clinical examined and diagnosed by four trained clinicians in orthopaedic medicine by STT (Selective tissue tension technics, Cyriax)
 - two Norwegian and two Swedish examiners
- The diagnostic reliability was assessed by observed and chance corrected agreement, kappa statistics, of the $62 \times 6 = 372$ pairs of examiners
 - A-B, A-C, A-D, B-C, B-D, and C-D

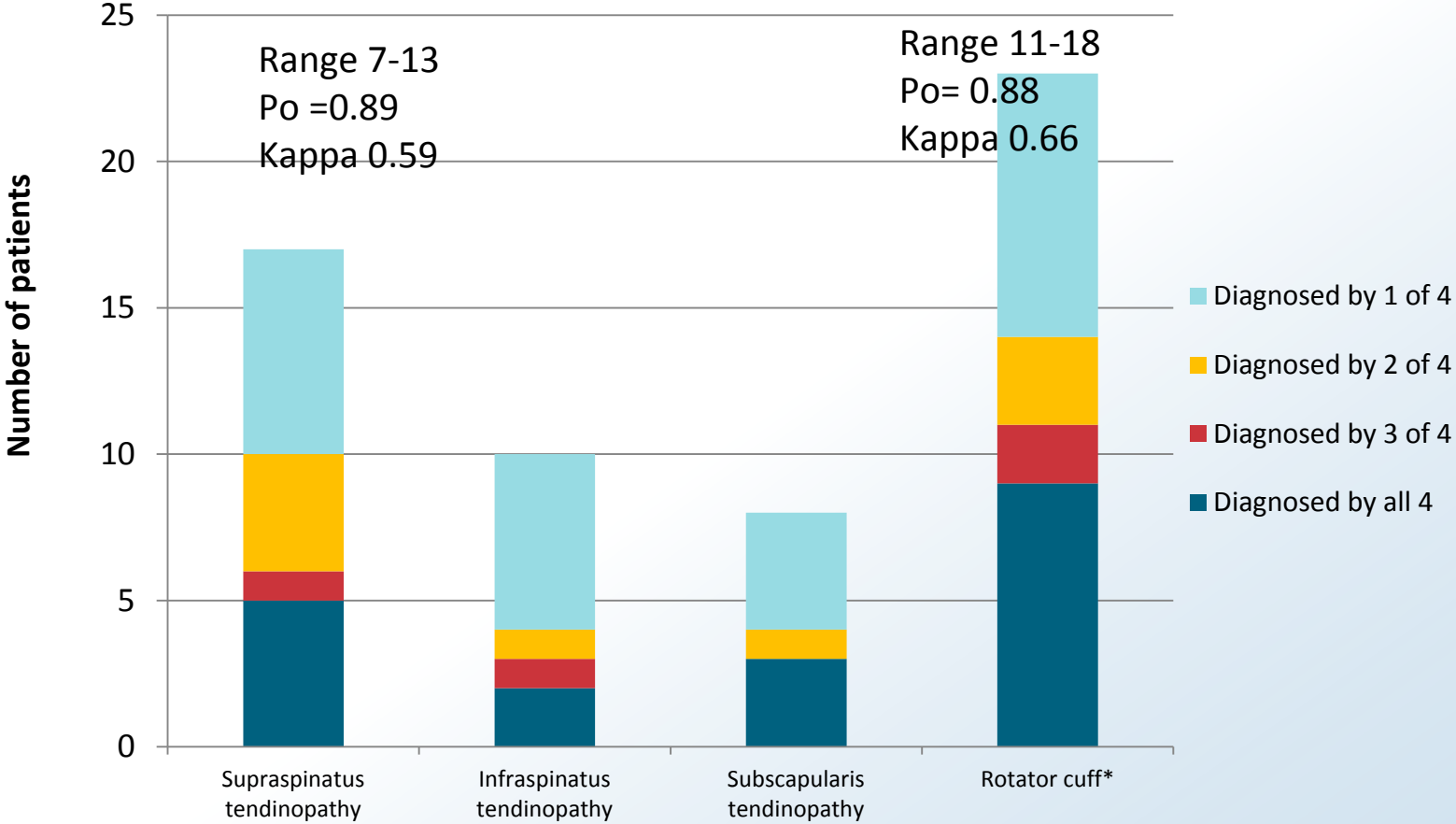
Results



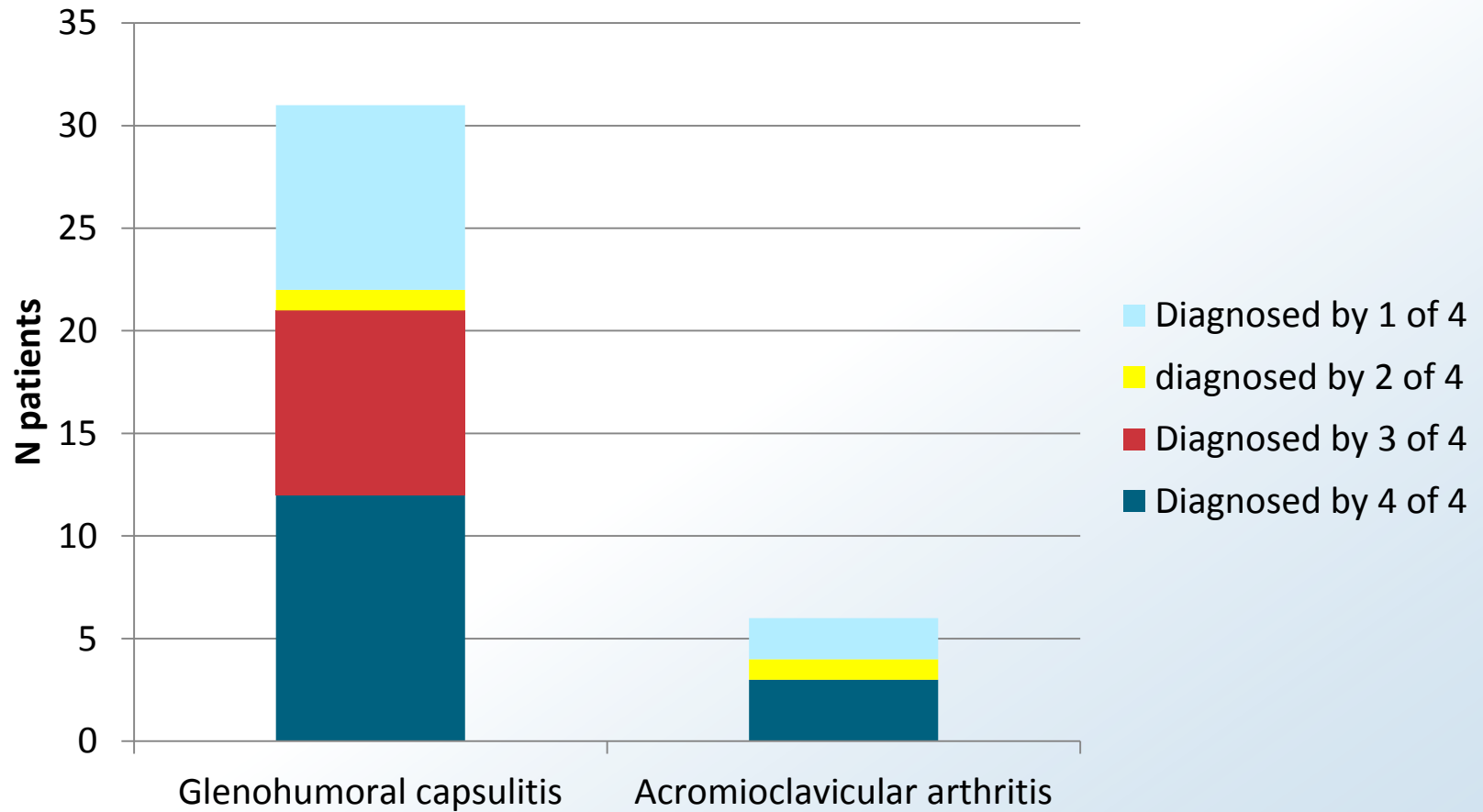
Rotator cuff tendinopathy



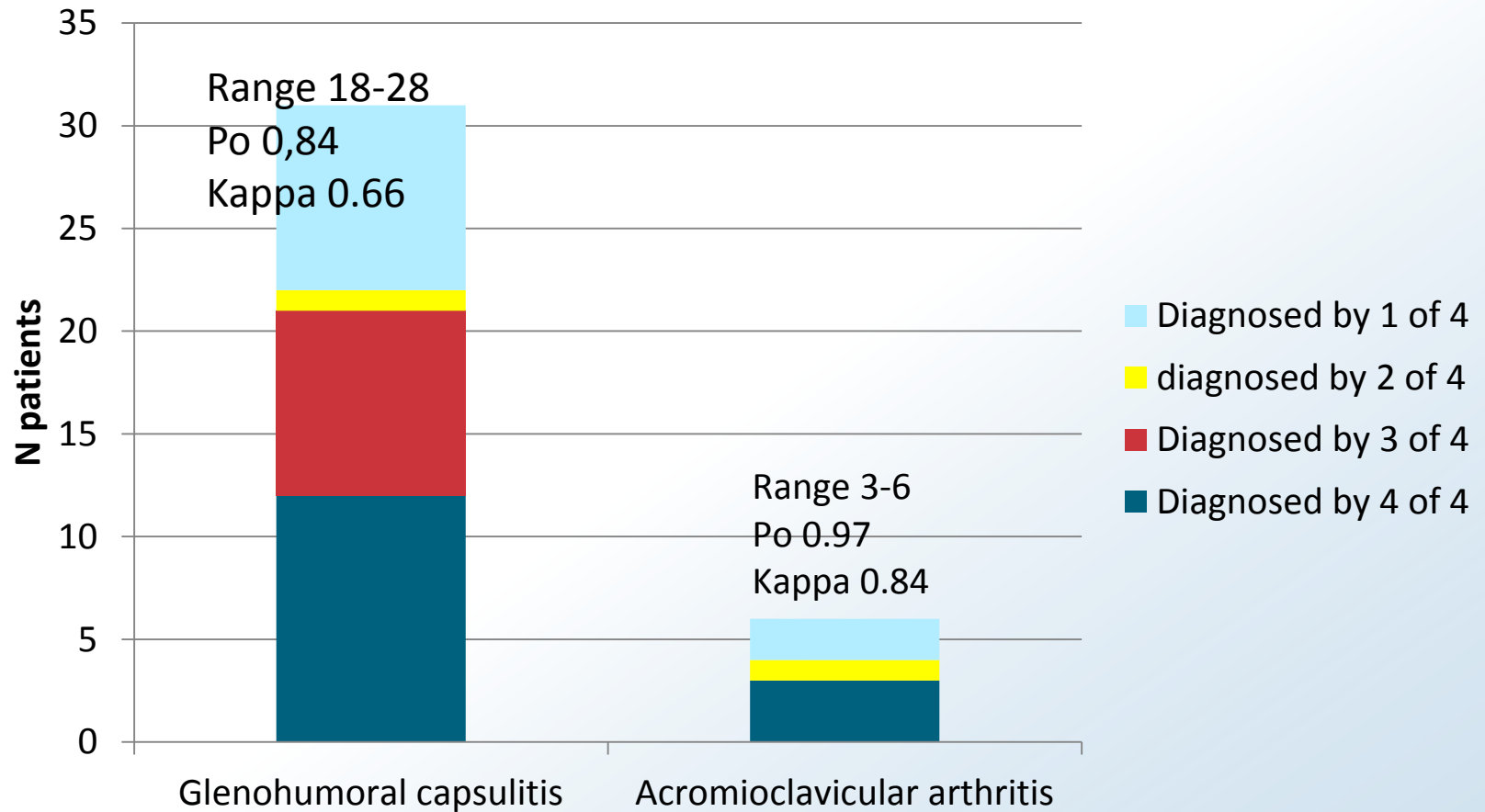
Rotator cuff tendinopathy



Capsulitis and A-C arthritis



Capsulitis and A-C artheritis



Individual STT

		Po	Kappa	95% CI
Passive abduction shoulder	Pain	0.69	0.37	0.27 - 0.46
	Limitation	0.86	0.70	0.62 - 0.78
Passive lateral rotation shoulder	Pain	0.71	0.19	0.08 - 0.30
	Limitation	0.83	0.66	0.57 - 0.73
Passive medial rotation shoulder	Pain	0.68	0.29	0.20 - 0.39
	Limitation	0.81	0.45	0.35 - 0.56
Resisted abduction shoulder	Pain	0.63	0.26	0.17 - 0.36
	Weakness	0.87	n0.07	n0.08 - n0.04

Discussion

- Experienced and dedicated examiners
- Reflecting primary health care?
 - Selective tissue tensions technics – systematic approach
 - Overestimation > underestimation diagnostic agreement

Summary

- Agreement diagnosis > agreement single STTs
- Although good agreement (Kappa 60-80) diagnostic accuracy is questionable
- Adequate as basis for treatment and standardized length of sick leave?