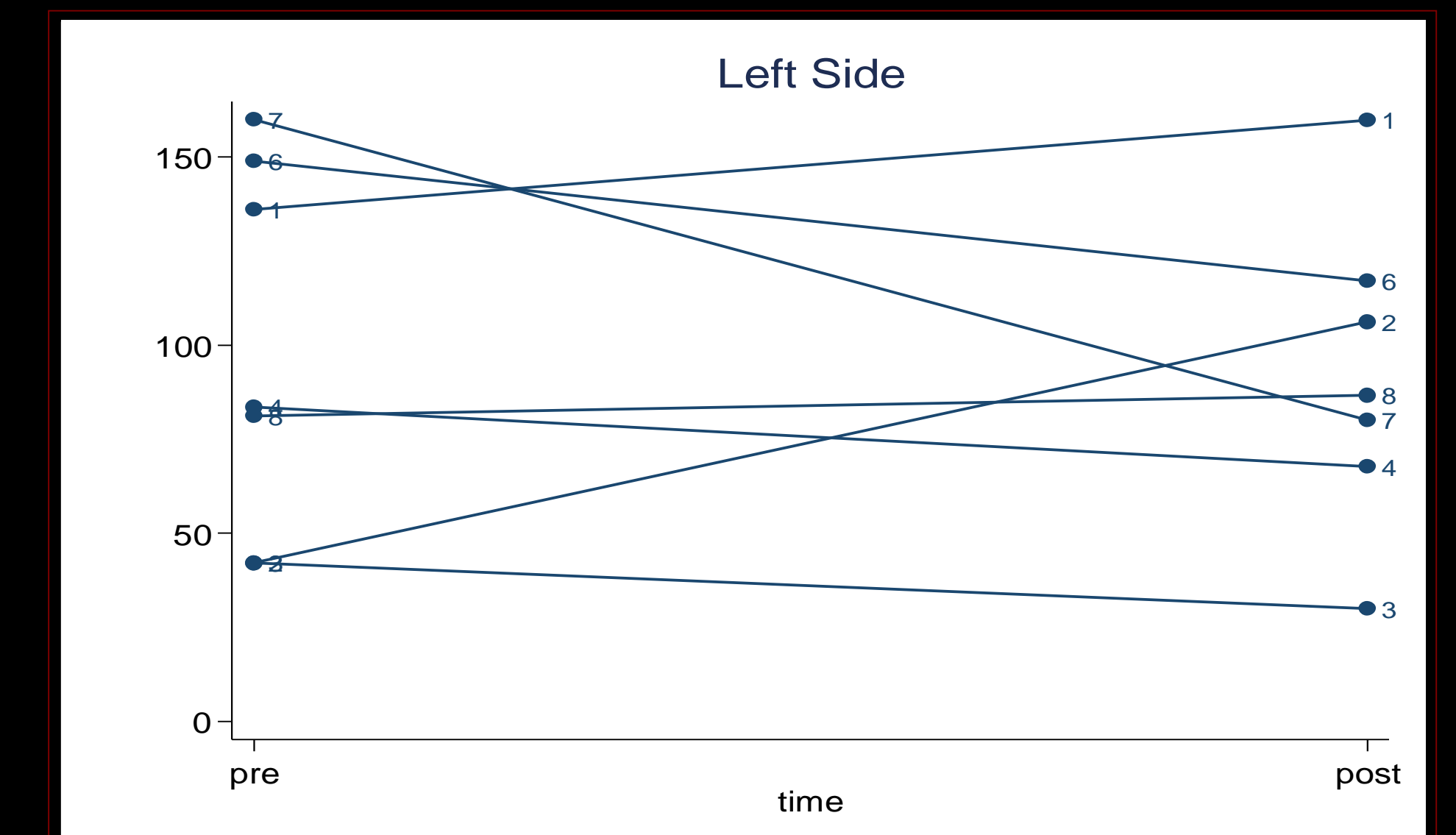
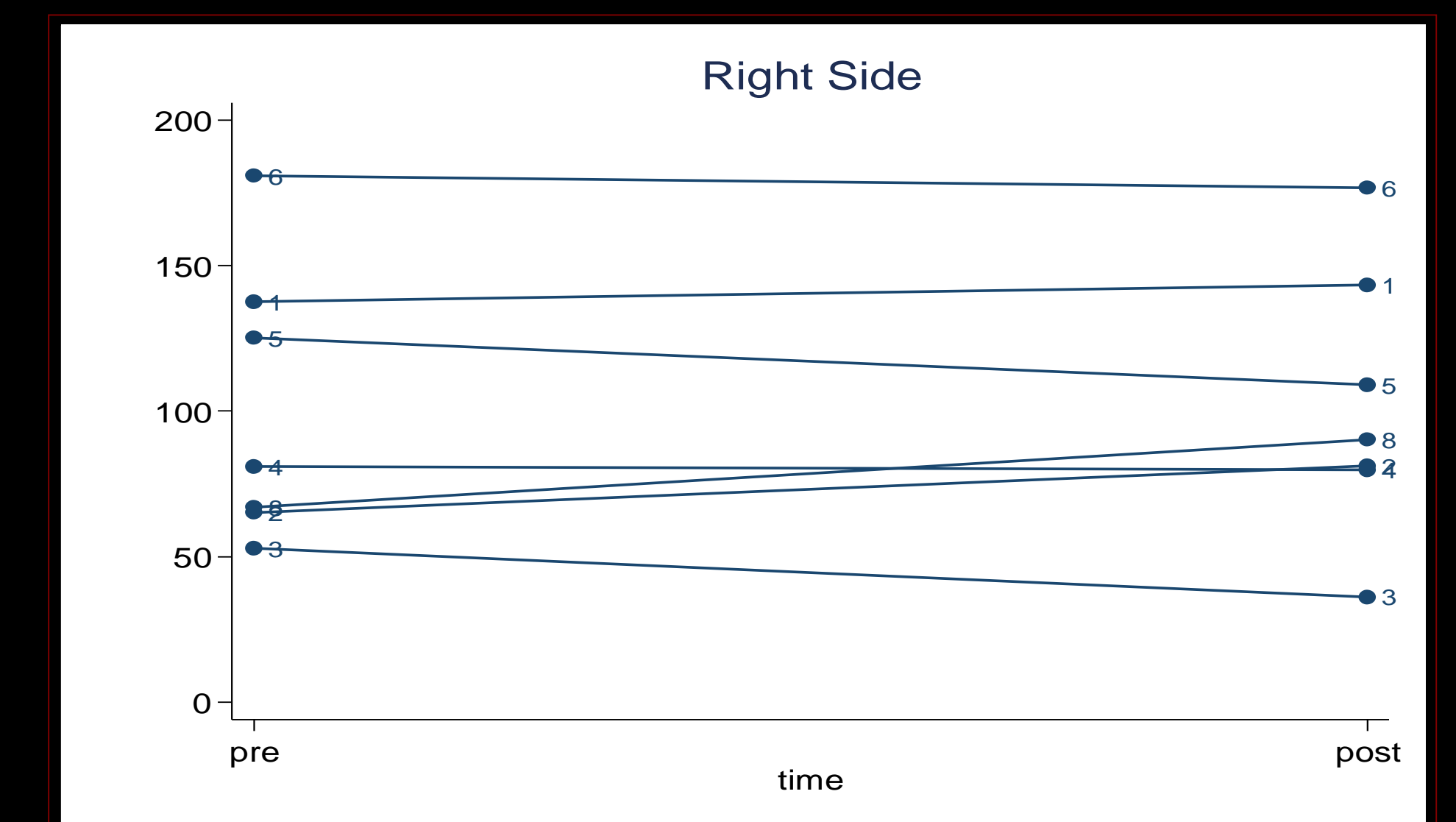
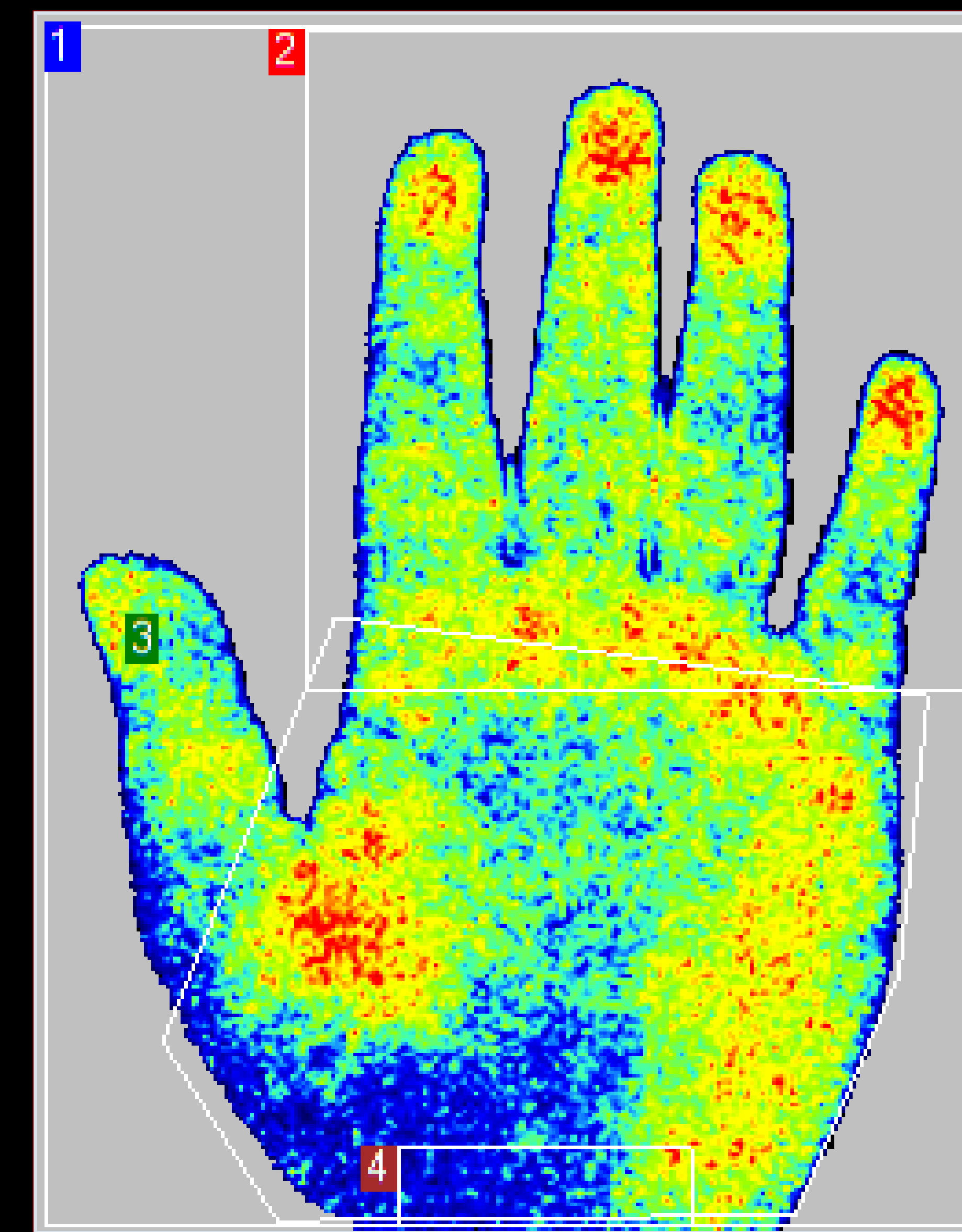
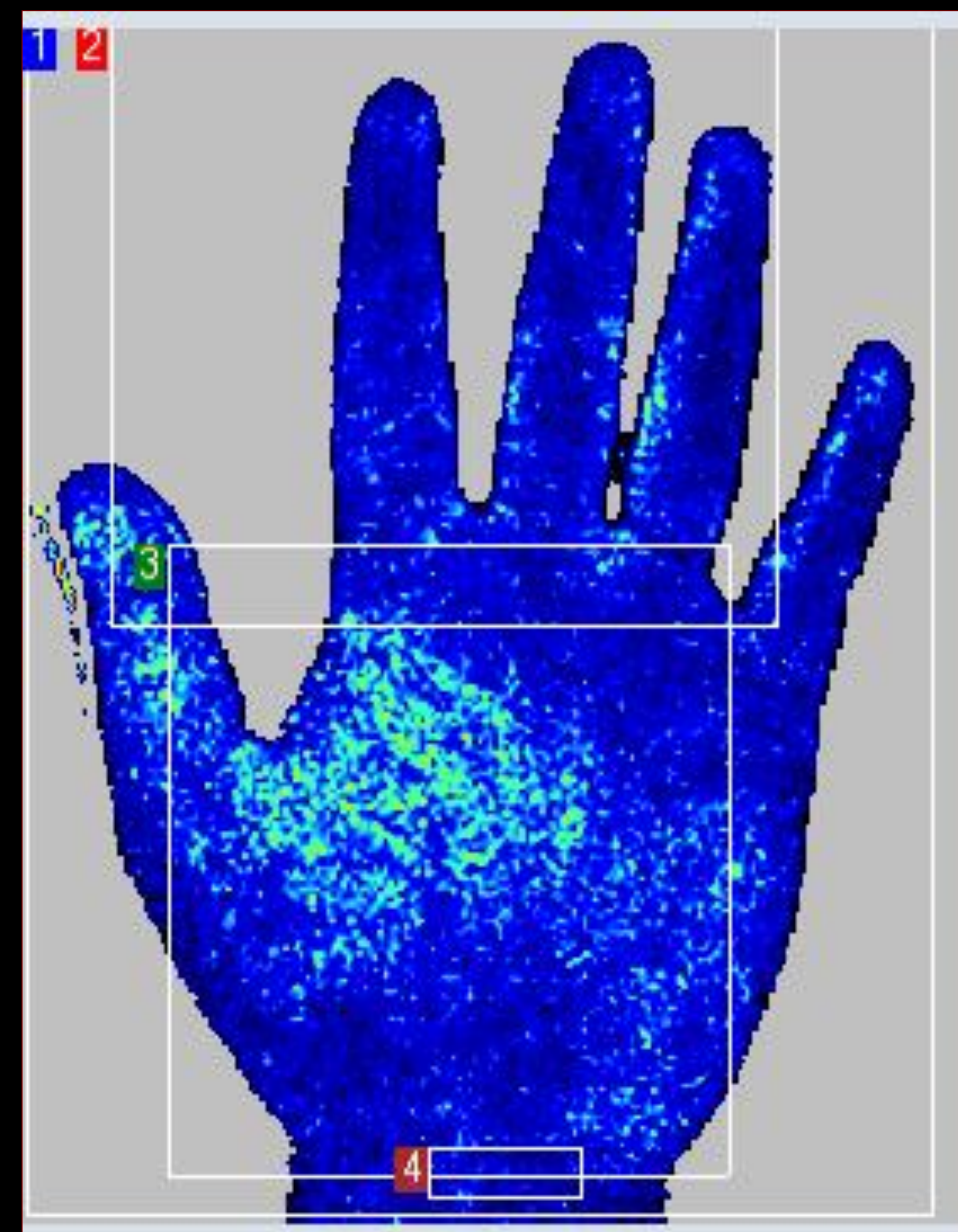
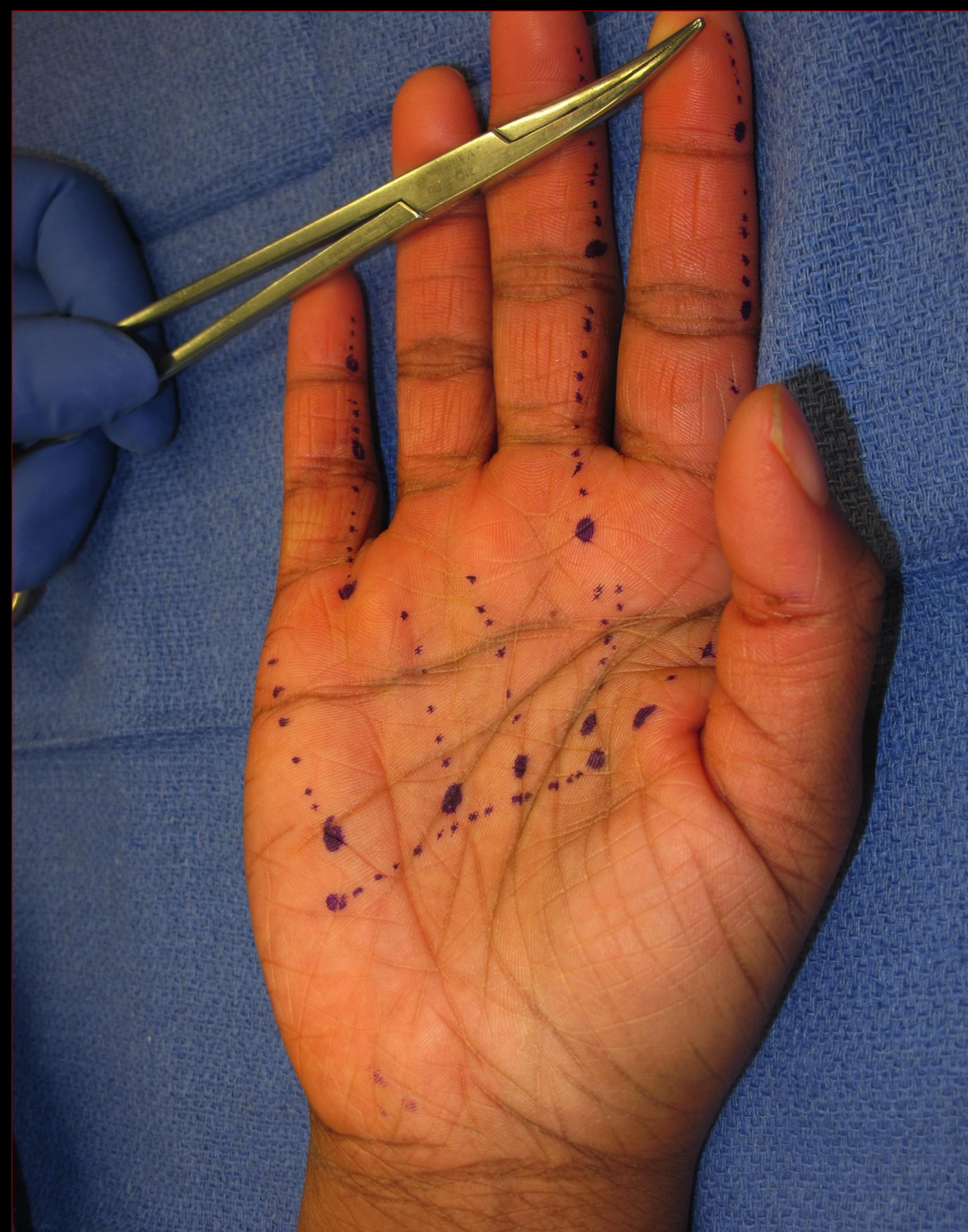


FAT TRANSFER TO THE UPPER AND LOWER EXTREMITY IN PATIENTS WITH RAYNAUD'S PHENOMENON – A NOVEL THERAPEUTIC MODALITY

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Background

Raynaud's phenomenon causes progressively decreasing blood flow to the extremities, resulting from an imbalance between vasoconstriction and vasodilation. This ultimately leads to tissue ischemia, fibrosis, scarring, contractures, ulcerations and even autoamputations in severe cases. Multiple treatment options have been attempted ranging from biofeedback, phosphodiesterase inhibitors, calcium channel inhibitors, botulinum toxin injection, and surgical sympathectomy. Given the observed skin improvements following fat injection to radiated breast skin, we propose fat grafting to the hand as a means to delay progression of the disease in the hand and feet.

Methods

We adapt a previously described method of cosmetic rejuvenation of the hand by means of fat grafting. Indications included symptomatic Raynaud's phenomenon with failure of medical management. Fat is harvested from abdominal depots. Approximately 30 ml of decanted fat is injected via blunt cannulae into the affected extremity, with the following distribution: 10 ml in dorsum of hand; 3 ml in the snuff-box; 2-3 ml in each dorsal webspace; 6 ml along the palmar arch; 1 ml in palmar webspaces 2-4; 2 ml in the first webspace; 2 ml ulnar border of small finger.

Results

A total of 14 patients were treated (21 hands, 5 feet). Twelve patients had undergone prior botulinum toxin injection, and nine patients had prior sympathectomy. Findings included reduced pain (average reduction of 5.8/10 to 2.2/10), less cold attacks, improved skin and soft tissue texture, decrease in ulcerations, and patient-reported improved function. Three patients had no change in clinical findings. Increased blood flow per speckle laser Doppler was noted in three of six patients tested. Three patients had no improvement on laser Doppler. There were no major complications.

Conclusion

Preliminary results of fat grafting to the extremities of patients with Raynaud's Phenomenon revealed improved symptomatology with suggestive evidence of measurably increased perfusion. Fat grafting may benefit the management of this patient population.

The authors have no conflicts of interest to report.