Functional Leg Length Asymmetry

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Research Question:

Does observed FLLI change after an atlas adjustment?


Pre R 3/8”
5/6/09


Post L 1/16”
5/6/09


Pre R 3/8”
5/6/09

Error in Measurement (point selection on digital image)

0.473 mm (SD)
N = 30

Error in Positioning

0.996 mm (SD)
N = 30

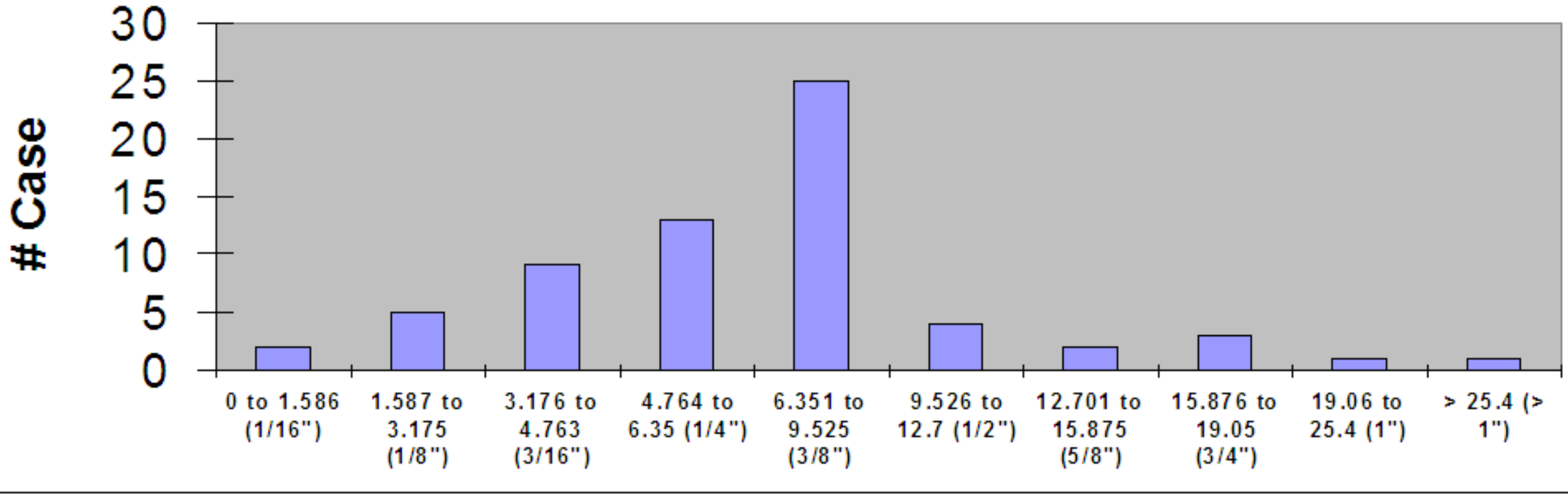
System Accuracy

+-1.991 mm

Functional Leg Length Asymmetry

Based on the above testing this system of measuring FLLI is valid for measurement of ***changes > 2 mm***

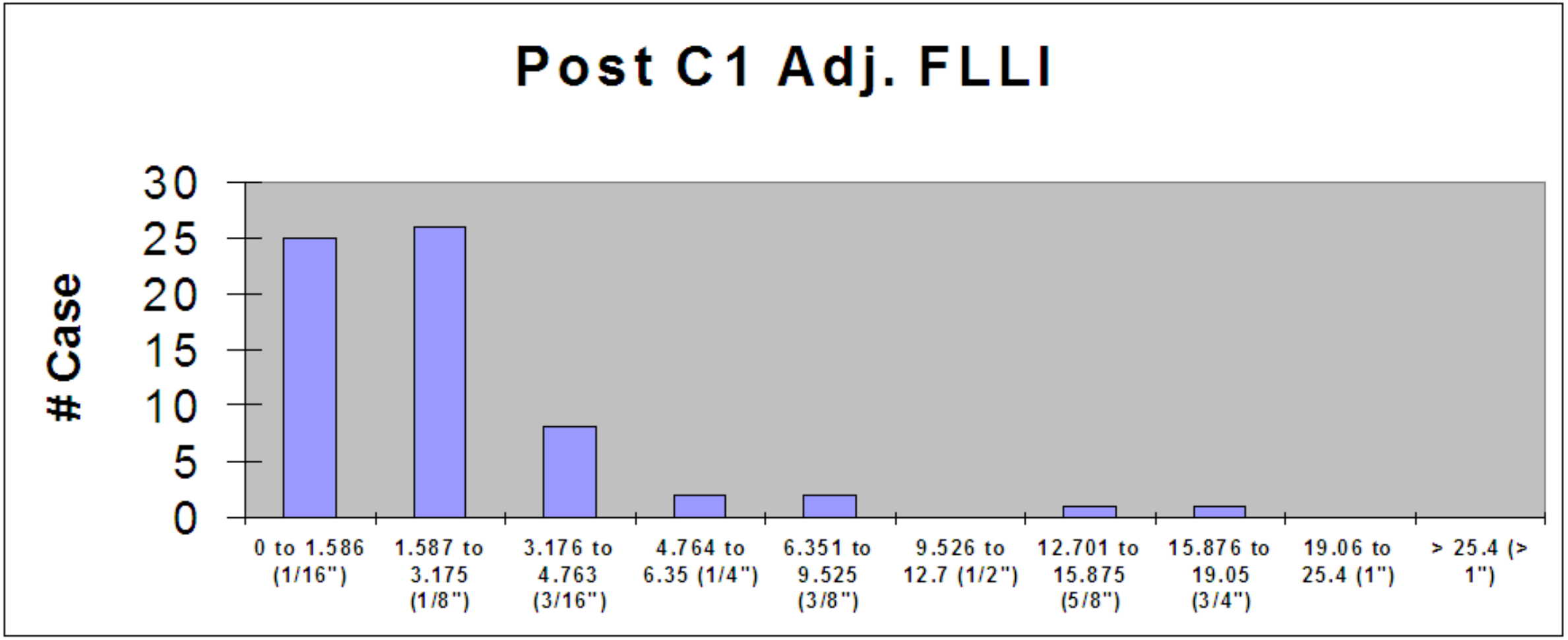
Baseline FLLI



Measurement of Magnitude FLLI (Before Adjustment)

7.50 mm (4.45 mm SD)
N=65

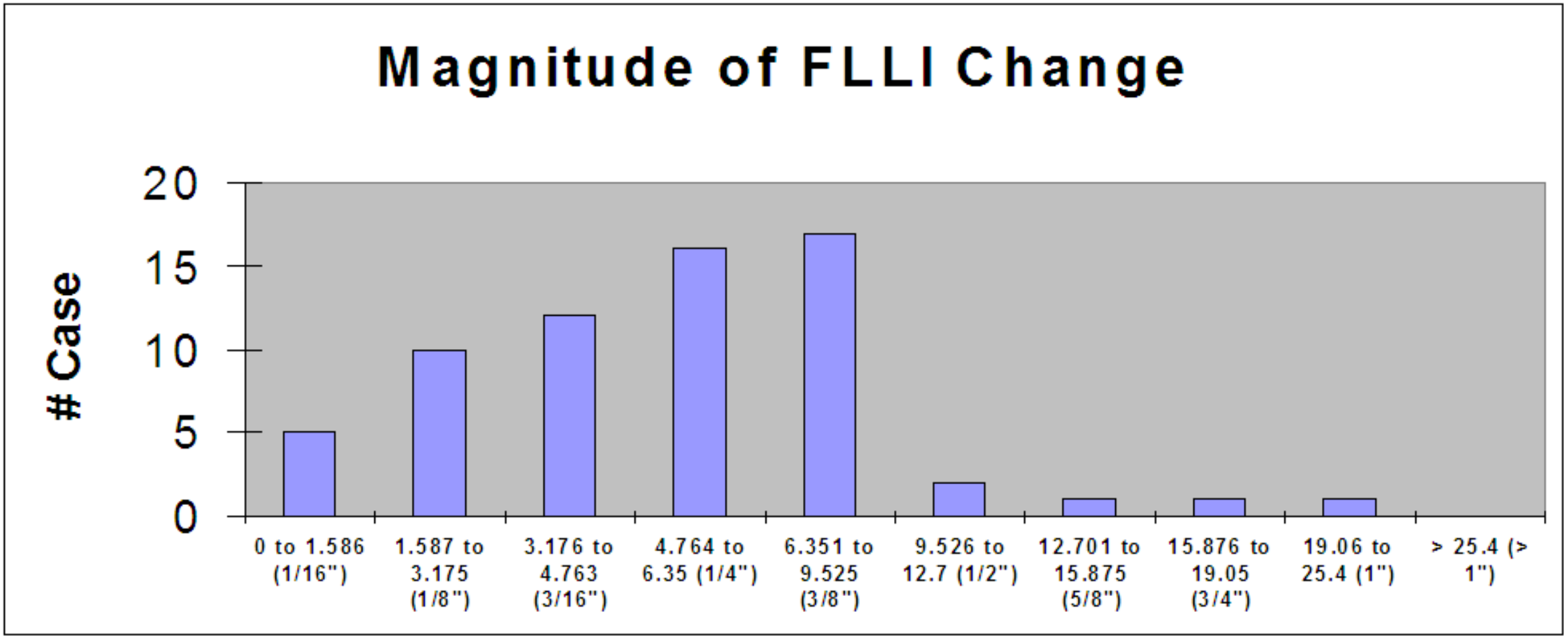
Measurement of Magnitude FLLI (After Adjustment)



Measurement of Magnitude FLLI (After Adjustment)

2.58 mm (3.03 mm SD)
N=65

Measurement of Magnitude of CHANGE IN FLLI (After Adjustment)



Measurement of Magnitude CHANGE FLLI (After Adjustment)

5.56 mm (3.69 mm SD)
N=65

Power Study

[1] -- *Friday, August 14, 2009 -- 10:37:53*

t tests - Means: Difference between two dependent means (matched pairs)

Analysis: Compromise: Compute implied a & power

Input: Tail(s) = Two

Effect size dz = 1.2496853

β/a ratio = 2

Total sample size = 65

Output: Noncentrality parameter δ =10.075285

Critical t = 5.193700

Df = 64

a err prob = 2.28571e-006

β err prob = 4.57142e-006

Power (1-β err prob) = 0.999995

Measurement of Magnitude CHANGE FLLI (After Adjustment)

Conclusions: Observed FLLI reductions are present following a vectored atlas adjustment that are not due to patient re-positioning or measurement errors.

NOT JUST A MOMENT IN TIME