Do Outcomes or Subsequent Injuries Differ After Ulnar Collateral Ligament Reconstruction With Palmaris Versus Hamstring Autograft?

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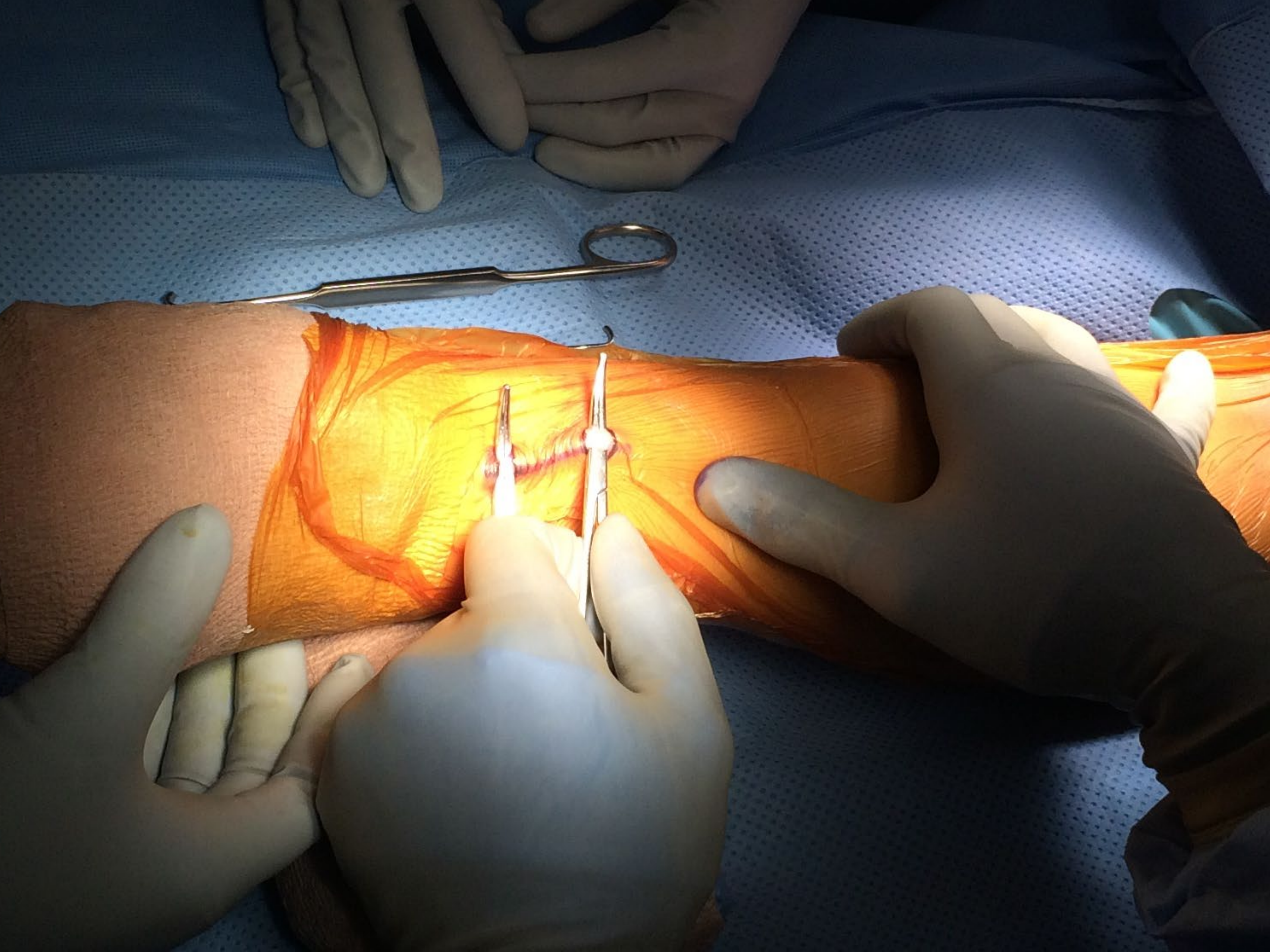
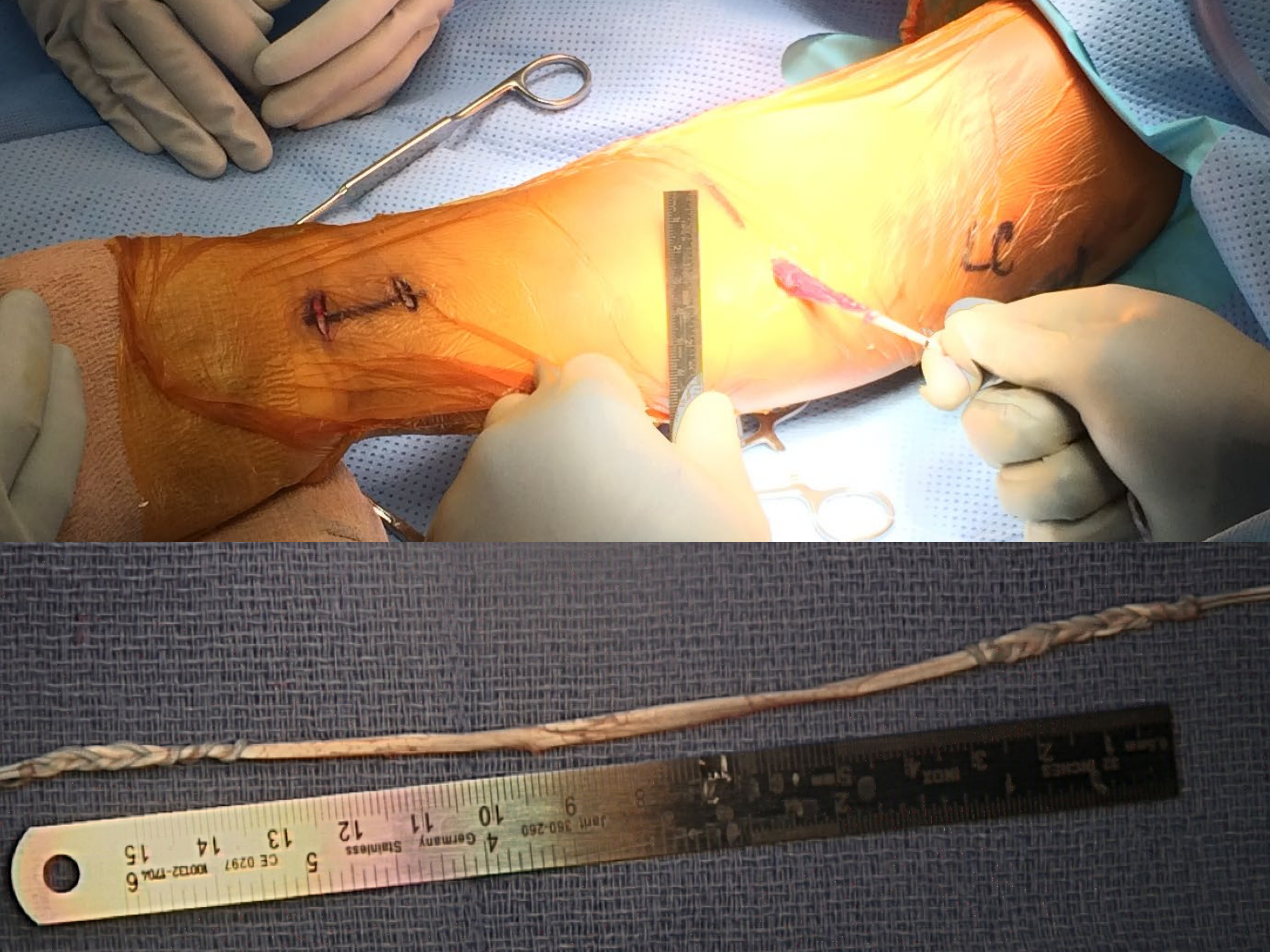
Torn ulnar collateral ligament

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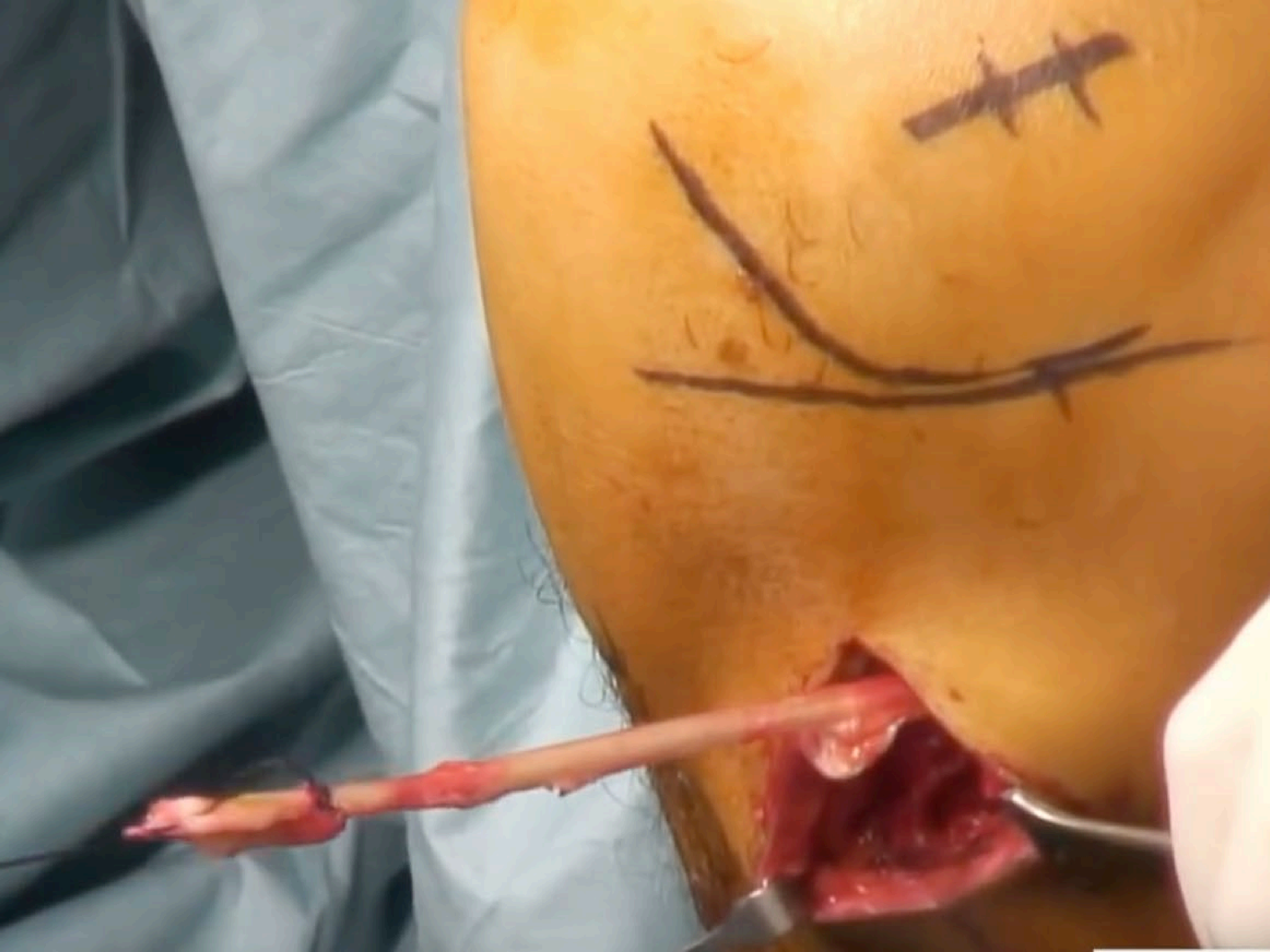

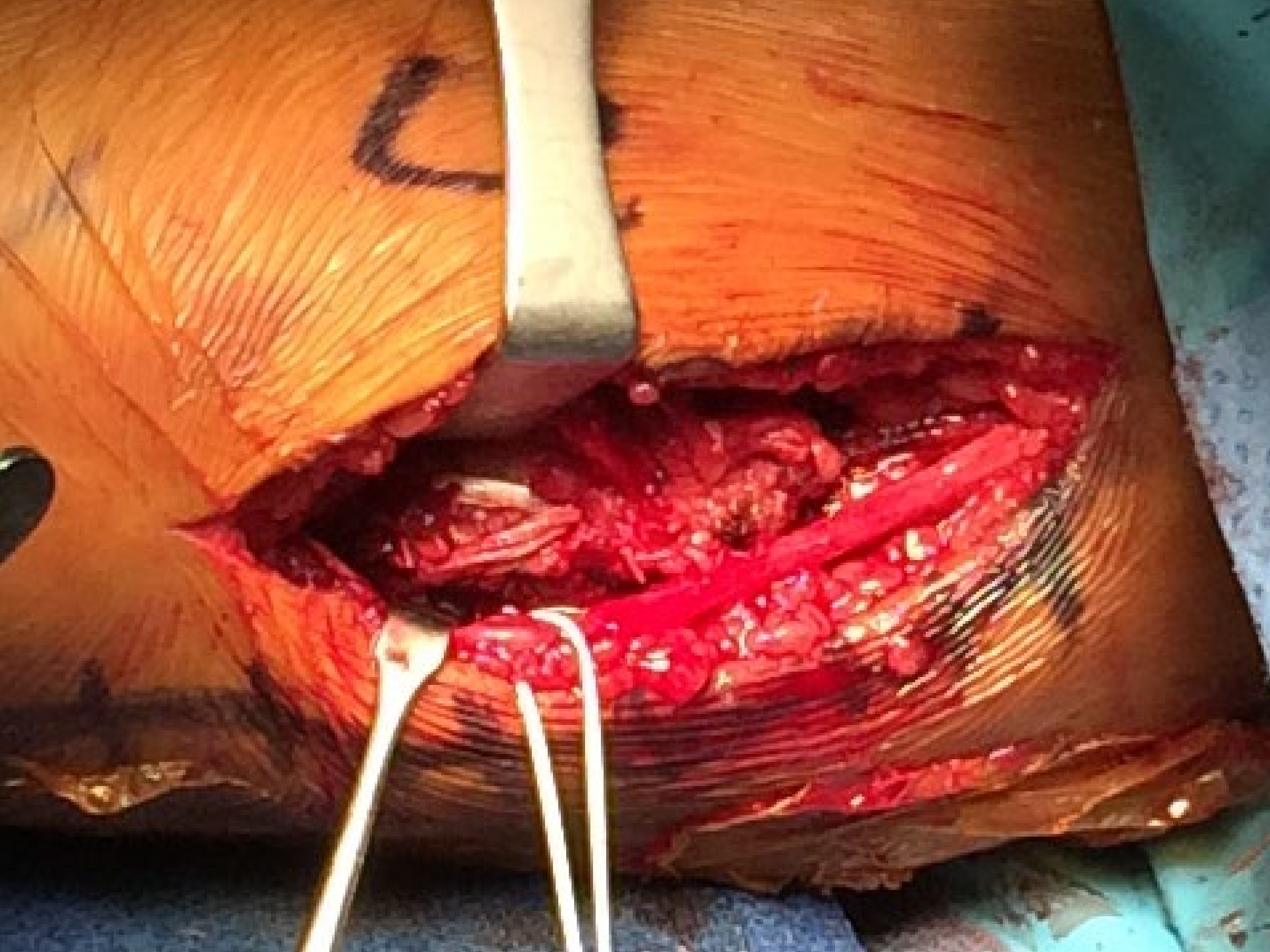

Purpose

Determine performance and rate of return to sport (RTS) in professional baseball players after UCLR and compare performance and RTS rate, as well as injury rates, between players who underwent UCLR with hamstring versus palmaris autograft.

Methods

- Database study
- 2012-2016
- Demographics
- Performance
- Surgery details
- Return to play
- >6 mon f/u

Included pitchers: 191 of each graft
No differences in other covariates

Variable	Hamstring	Palmaris	P value
Docking technique Figure-of-8 technique Other technique	38.7% 46.6% 14.7%	35.8% 57.5% 6.7%	**0.018**
Ulnar nerve treatment	47.2%	51.8%	0.362
Osteophytes and/or loose bodies	24.6%	22.6%	0.633
PRP/BMAC	1.5%	1.5%	1.000
Pitcher	91.3%	91.8%	0.856
Major League level	20%	24.1%	0.329
Years professional	4	4	0.491

No differences in return to play Injuries vary with graft type

Variable	Hamstring	Palmaris	P value
RTP	72.3%	77.4%	0.243
Days to RTP	418	409	0.555
RTPPV	61%	68.7%	0.112
Days to RTPPV	501	470	0.386
Subsequent Ipsilateral LE injury	9.7%	12.3%	0.419
Subsequent Contralateral LE injury	**12.8%**	**6.7%**	**0.040**
Subsequent UE Injury	**28.2%**	**37.4%**	**0.052**

Negative predictors of return to play

- Minor leaguers
  - $p=0.004$, 3% of variation
- More years experience
  - $p=0.044$, 1.4% of variation

No differences in performance post-op, both groups declined

- WAR(P)
  - Hamstring:
    - Pre: 0.86±1.17
    - Post: 0.35±0.8
    - P=0.029
  - Palmaris:
    - Pre: 1.23±1.06
    - Post: 0.34±0.6
    - P<0.001
  - Comparison
    - Pre: P=0.269
    - Post: P=0.764
- Similar findings for other metrics, trends towards higher usage (games, played appearances) for palmaris

Conclusion

Baseball players who undergo UCLR with hamstring autograft are more likely to sustain a subsequent lower extremity injury while those who undergo UCLR with a palmaris are more likely to sustain an upper extremity injury.

No difference in performance or RTS rates existed between groups. Both groups significantly declined in WAR and WHIP after UCLR.