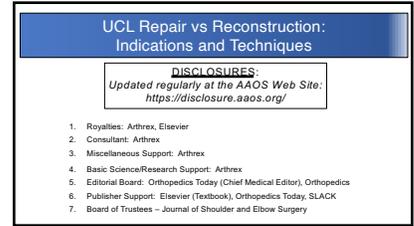




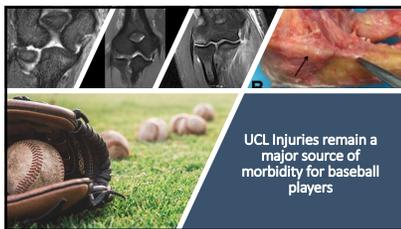
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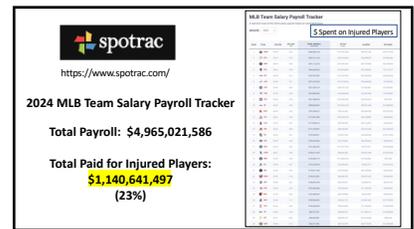
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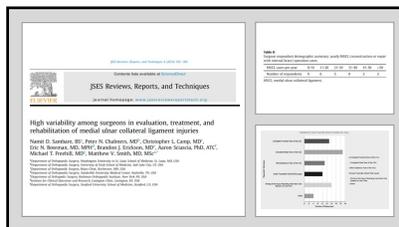
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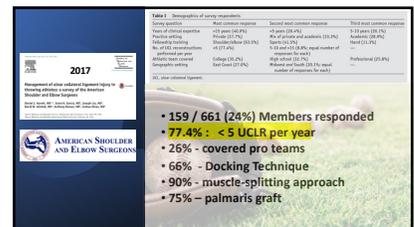
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9

Journal of AAOS 2016

Comparison of Surgical Techniques for Ulnar Collateral Ligament Reconstruction in Overhead Athletes

Edward S. Chang¹, Christopher C. Dodson, Michael G. Coombs

Ulna Tunnel Humeral Docking

Favorites:
Muscle splitting
Ulna tunnel
Docking
Move nerve only when symptomatic ->
Andrews Approach

10

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

Journal of AAOS 2019

• Included all players from 2010 - 2015 who underwent UCLR with hamstring autograft (MLB HITS Database)

• Players with hamstring UCLR were compared with a matched control group of players who underwent UCLR with palmaris autograft

• 195 players underwent UCLR with hamstring autograft

• **No differences in RTS rates or timing to RTS were found between the hamstring and palmaris groups**

11

Ulnar Collateral Ligament Reconstruction of the Elbow

A Systematic Review of the Literature

Journal of AAOS 2015

UCLR Surgical Variables:
RTS rate: **86.2% overall**
90% scored excellent/good -> Conway-Jobe scale

Specific Sport RTS rates
Collegiate athletes: 95.5%
High school athletes: 89.4%
Professional athletes: 86.4%

Specific Technique RTS rates
Docking technique: 97.0%
ASMI technique: 93.3%

12

Return to Sport?

-Competition vs Pre-injury Level)

13

Length of time between surgery and return to sport after ulnar collateral ligament reconstruction in Major League Baseball pitchers does not predict need for revision surgery

Journal of AAOS 2017

• 569 pitchers underwent UCLR and were included

• Both minor and major league pitchers included

• Average age 24.8 +/- 4.1 years

• **Average time to RTS following UCLR:**

- **Any professional level: 13 months** (478 +/- 365 days of 11.9 +/- 12.3 months)
- **Same professional level as prior to surgery: 17 months** (650 +/- 395 days of 17.1 +/- 13.0 months)

• **No differences in length of time to RTS between pitchers who underwent revision UCLR and those who didn't**

14

Return to Play and In-Game Performance Statistics Among Pitchers After Ulnar Collateral Ligament Reconstruction of the Elbow: A Systematic Review

Journal of AAOS 2019

• Rate of Return to Any Level of Pitching: 79% to 100%

• Subgroup analysis revealed that 79% to 87% of Major League Baseball (MLB) pitchers returned to preinjury levels of pitching

• **Mean time to return to play was 19.8 +/- 13.5 months**

• **Mean time to return to competition for MLB pitchers was 13 +/- 7.4 months**

• All studies found that pitchers pitched fewer innings per game or season

15

Biomechanical Comparison of Ulnar Collateral Ligament Repair With Internal Bracing Versus Modified Jobe Reconstruction

Journal of AAOS 2015

REPAIR with Internal Brace[®] Augmentation MODIFIED JOBE UCLR

Augmented UCL Repair replicates the time-zero failure strength of traditional UCLR, and appears more resistant to gapping at low cyclic loads

16

Elbow Ulnar Collateral Ligament Repair With Suture Augmentation by Biomechanically Engineered Reconstruction and Clinically Demonstrates Excellent Outcomes: A Systematic Review

Journal of AAOS 2019

• **RTP (Same/Higher level): > 90%**

• **RTP Time: 7 months**

• **KJOC Score: > 90**

17

Recent Unpublished Results from ASMI (Dugas, Cain) Return to Sport

Journal of AAOS 2019

• UCL Repair with Internal Brace[®] (Gracilis autograft, Andrews Technique, Ulnar nerve transposed 100%)

• **Time: 9 Months**

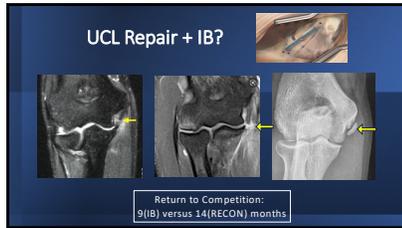
• **Time: 13 Months**

• > 98% of those who desire to return to play

• > 80% of those who desire to return to play

ANDREWS Sports Medicine

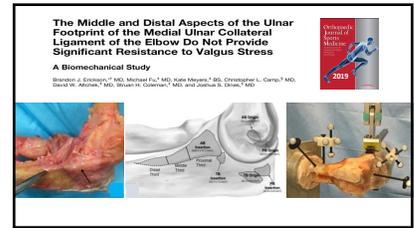
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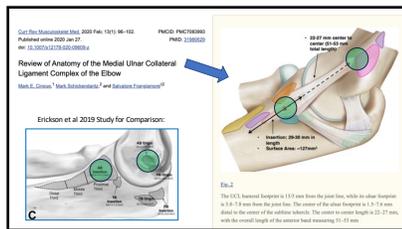
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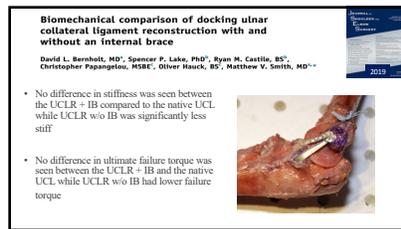
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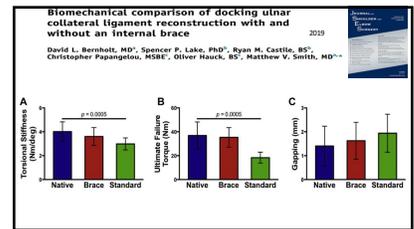
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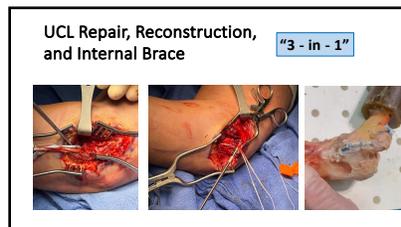
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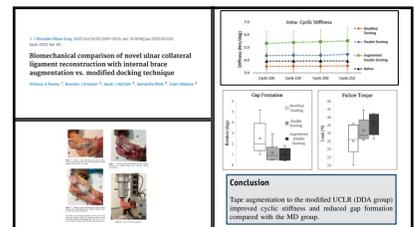
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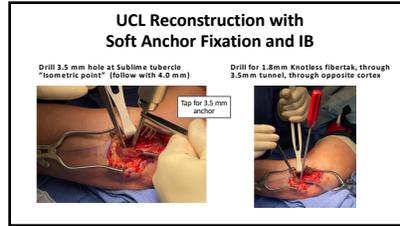
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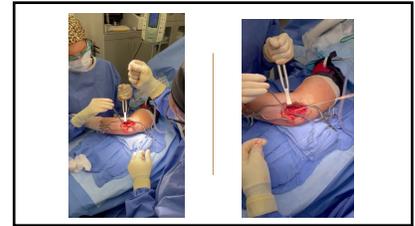
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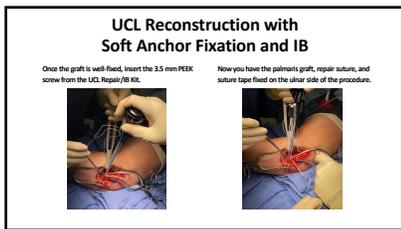
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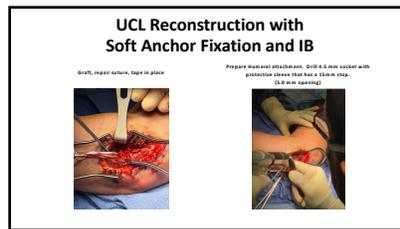
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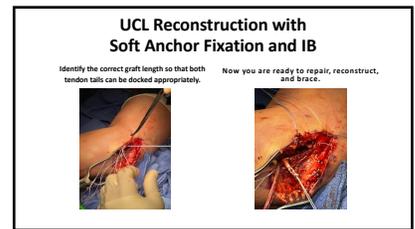
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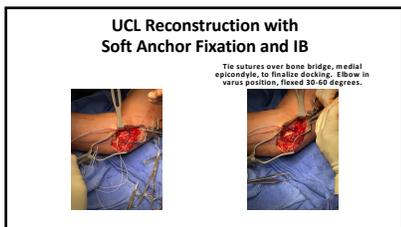
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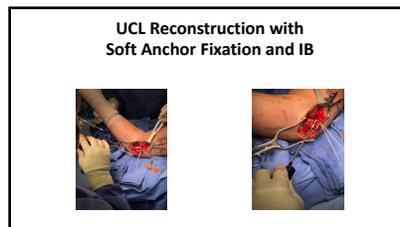
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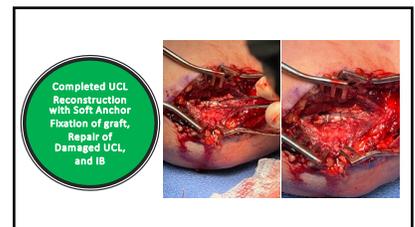
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Ulnar Collateral Ligament Reconstruction with Internal Brace Augmentation in Baseball and Softball Players

ROMECOM **duly**

	Repair to Proximal	Repair to Distal
Success Rate	92.3%	92.3%
Return to Play	92.3%	92.3%
Return to Sport	92.3%	92.3%

Return to Sports

	Repair to Proximal	Repair to Distal
Return to Play	92.3%	92.3%
Return to Sport	92.3%	92.3%

47

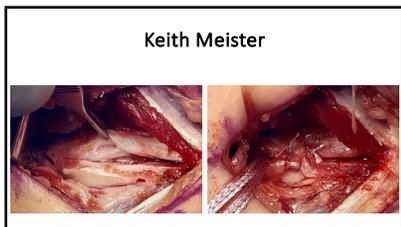
Keith Meister

Hybrid?

Keith, good luck tonight! Wishing your team the best! I know that you have been using a hybrid method for UCL surgery, your classic tendon procedure with an ulna tunnel and docking on the humerus, combined with some form of internal brace. Can you share with me a picture or figures of that procedure?

Have over 300 I think like this. Prob 200 pro elbows. Happy to discuss...

48



49

Ulnar Side (Sublime Tubercle)

Keith Meister

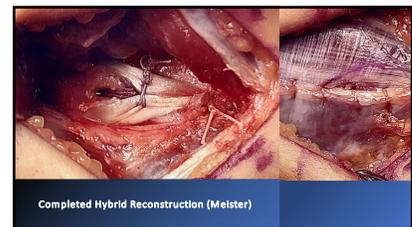
Everything docked proximally. I never use a screw proximally.

Tension at 30 deg flexion full supination and tie down tight.

Tension brace first then graft.

- Graft through tunnel
- IB fixed with Anchor at Separate Site

50



51

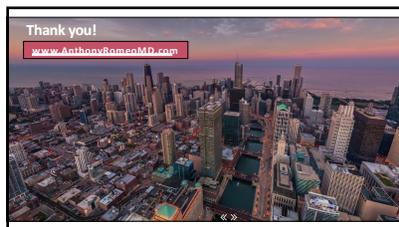
UCL – to repair, reconstruct, or both?

First Choice: Repair with Internal Brace:
Younger athletes
Disadvantage: injury
No loss of tissue
No heterotopic bone
Desire to return in 6-9 months

Second Choice: Reconstruction with autograft:
Significant damage to ligament
Heterotopic bone
Ability to rehab over 12-18 months

Third Choice: Repair/Reconstruction, Internal Brace:
Tissue deficiency
Desire to return 9-12 months

54



55



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