

Outcomes after Elbow Ulnar Collateral Ligament Reconstruction with the Docking Plus Technique in 163 Athletes

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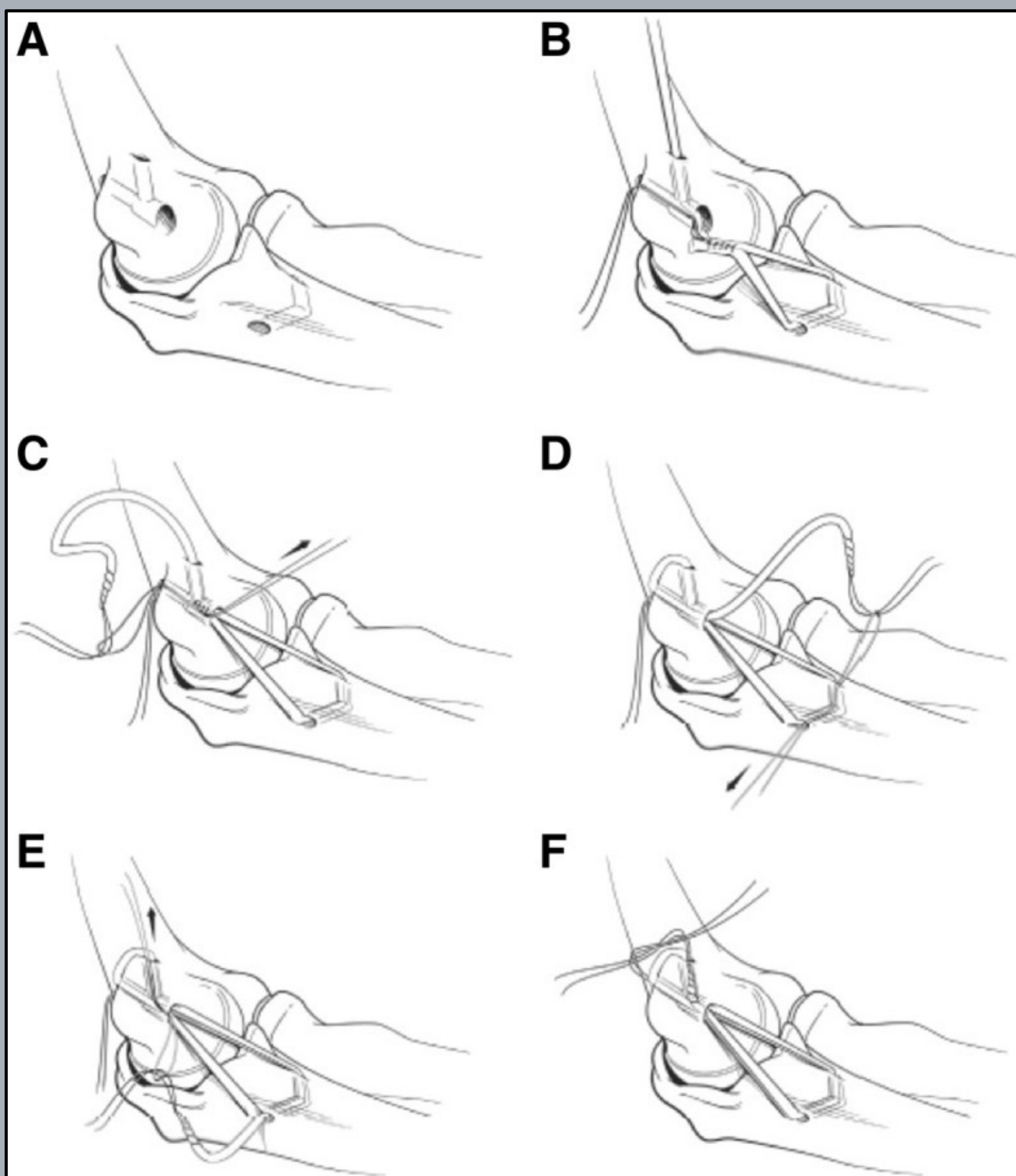
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Background

- In this retrospective case series we examined 163 athletes who underwent ulnar collateral ligament (UCL) reconstruction (UCLR) from 2015-2018.
- All cases were by a single surgeon at a high volume center using the Docking Plus Technique. We previously reported outcomes in 324 athletes from 2005-2014 with 88% of patients reporting a Conway score of good or excellent.
- The purpose of this study was to determine if patients undergoing UCLR with the docking plus technique are able to return to sport and to better characterize the athletes needing this procedure
- Our hypothesis was that our cohort would largely be able to return to their previous level of play and be mostly college level pitchers.

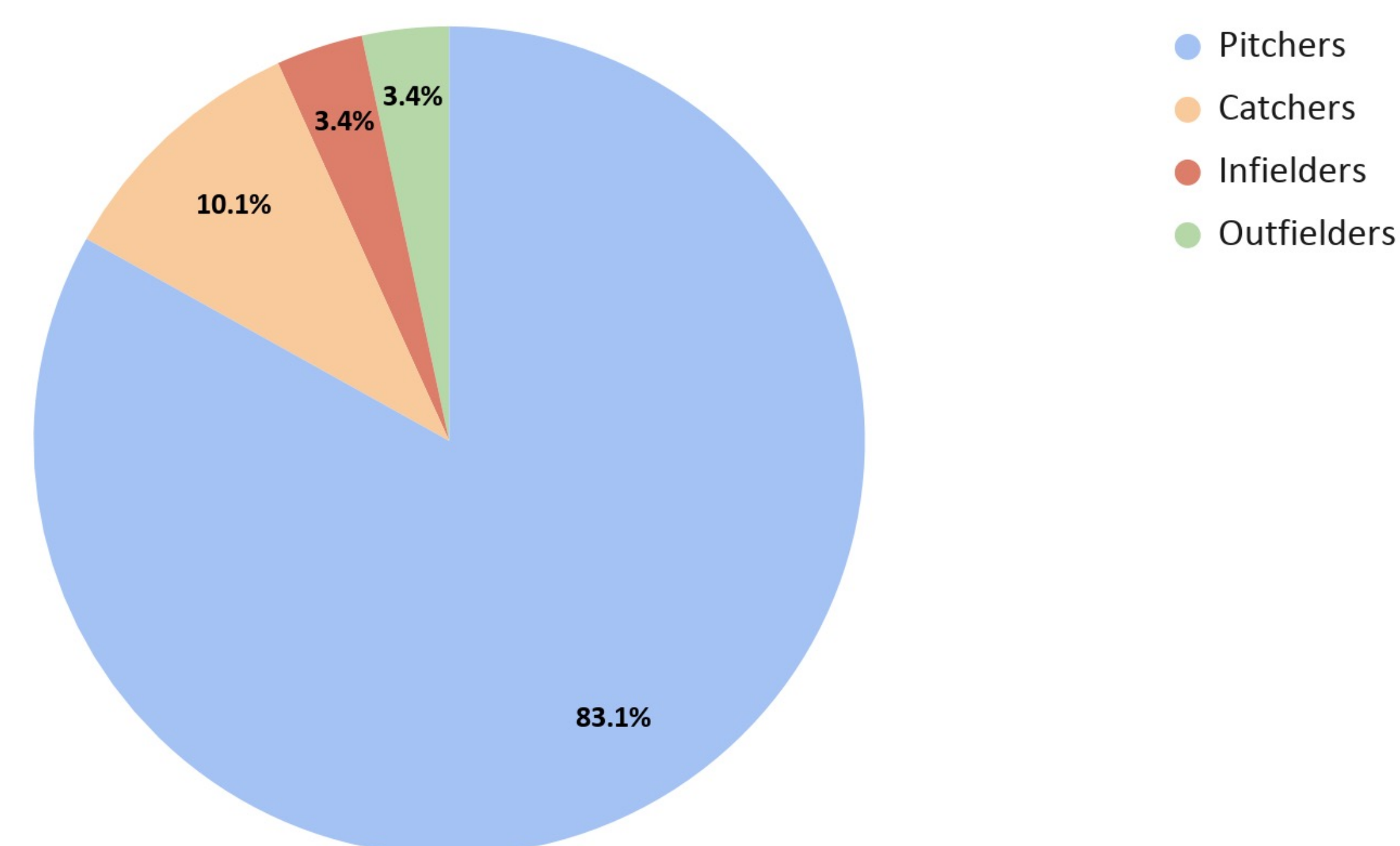


METHODS

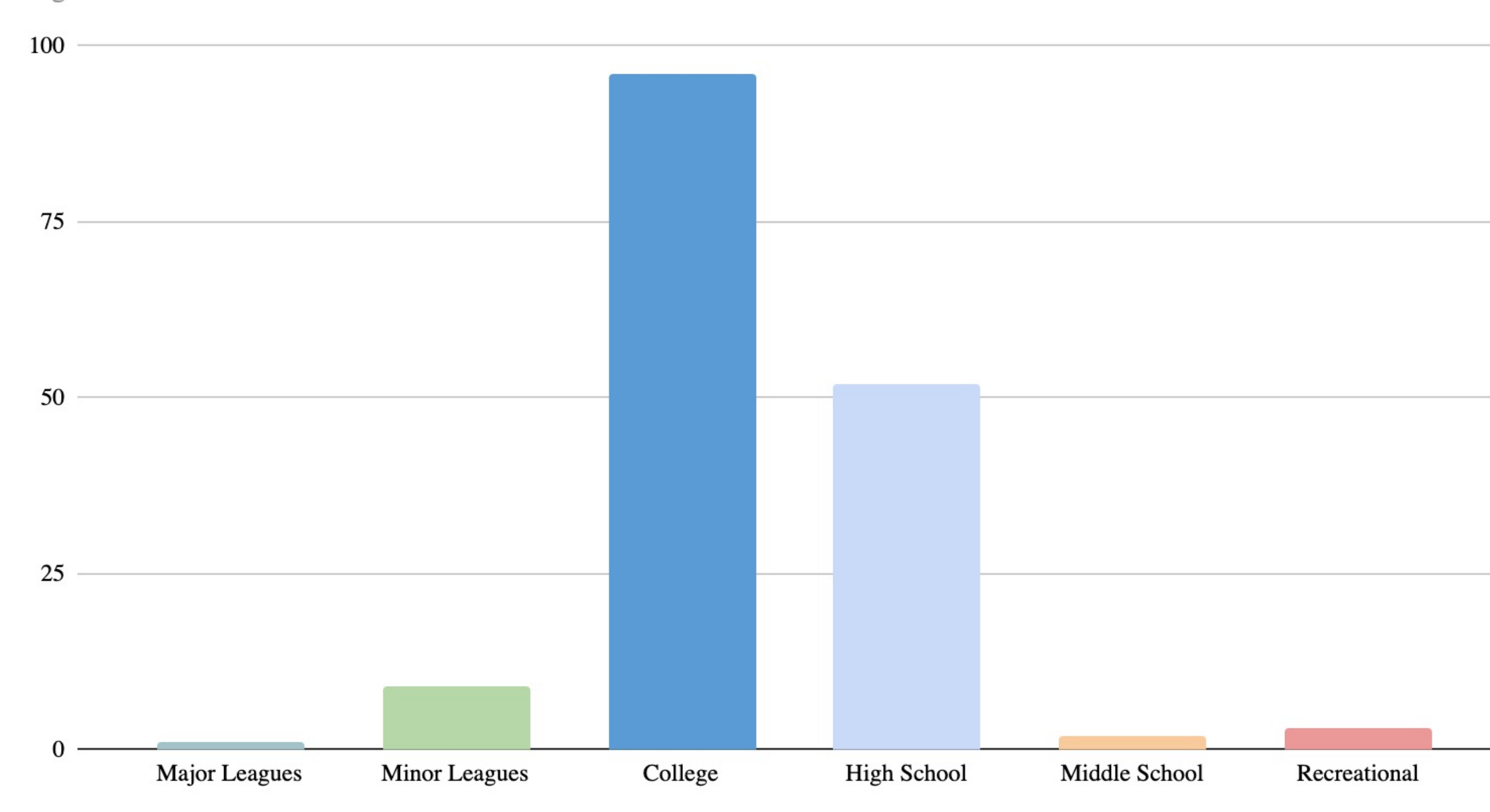
- Our practice database was queried from January 2015 through December 2018 for Current Procedural Terminology (CPT) code 24346 which corresponds to, "Reconstruction medial collateral ligament, elbow, with tendon graft."
- We were able to reach a total of 163 patients out of 385 total and they were asked for background demographic information and information about their athletic careers before and after UCLR.

Results

Primary Position of Baseball Players Undergoing UCLR
Figure 1



Level of Play at Time of Surgery
Figure 2



Injury Presentation
Figure 3

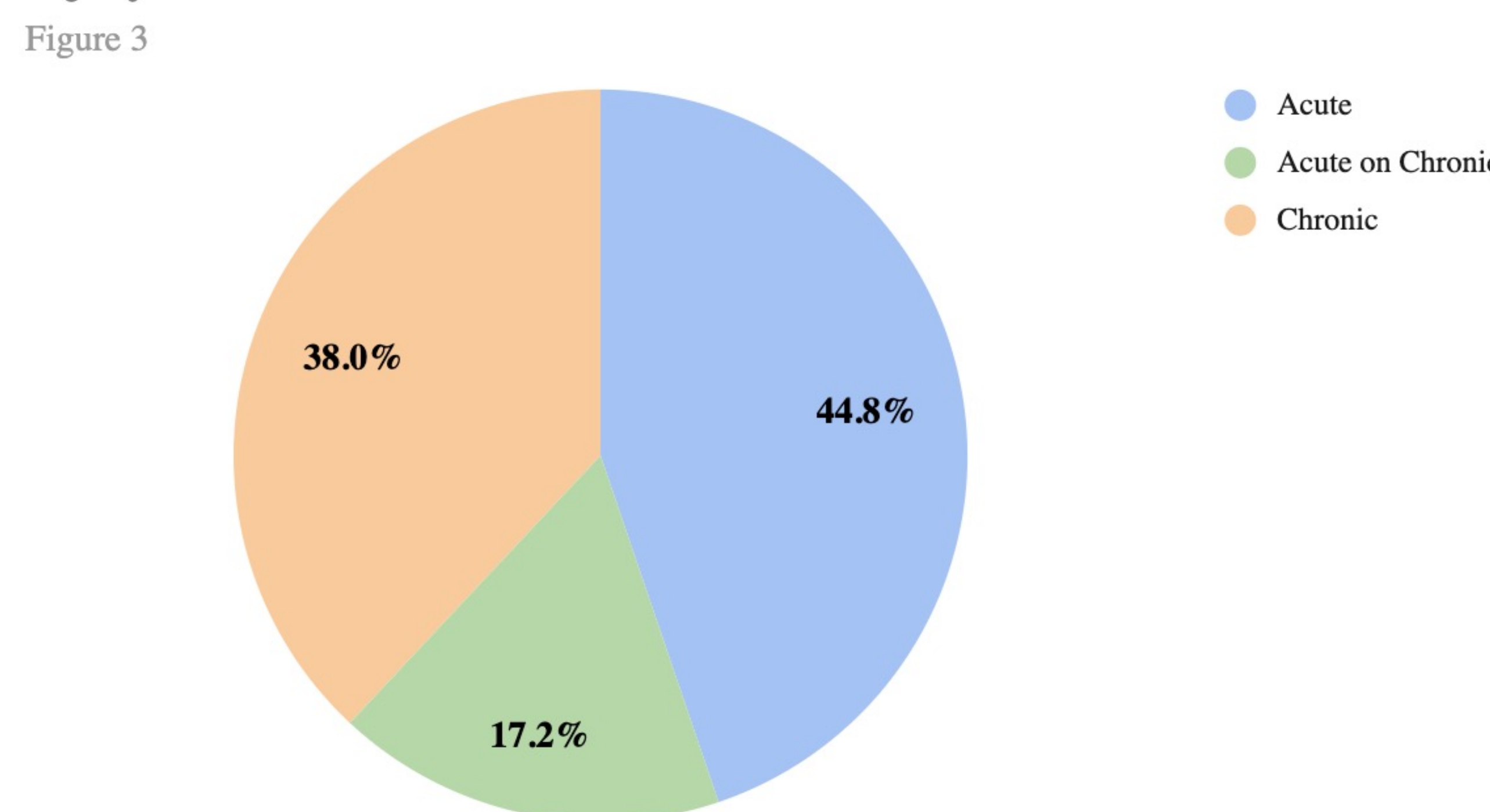
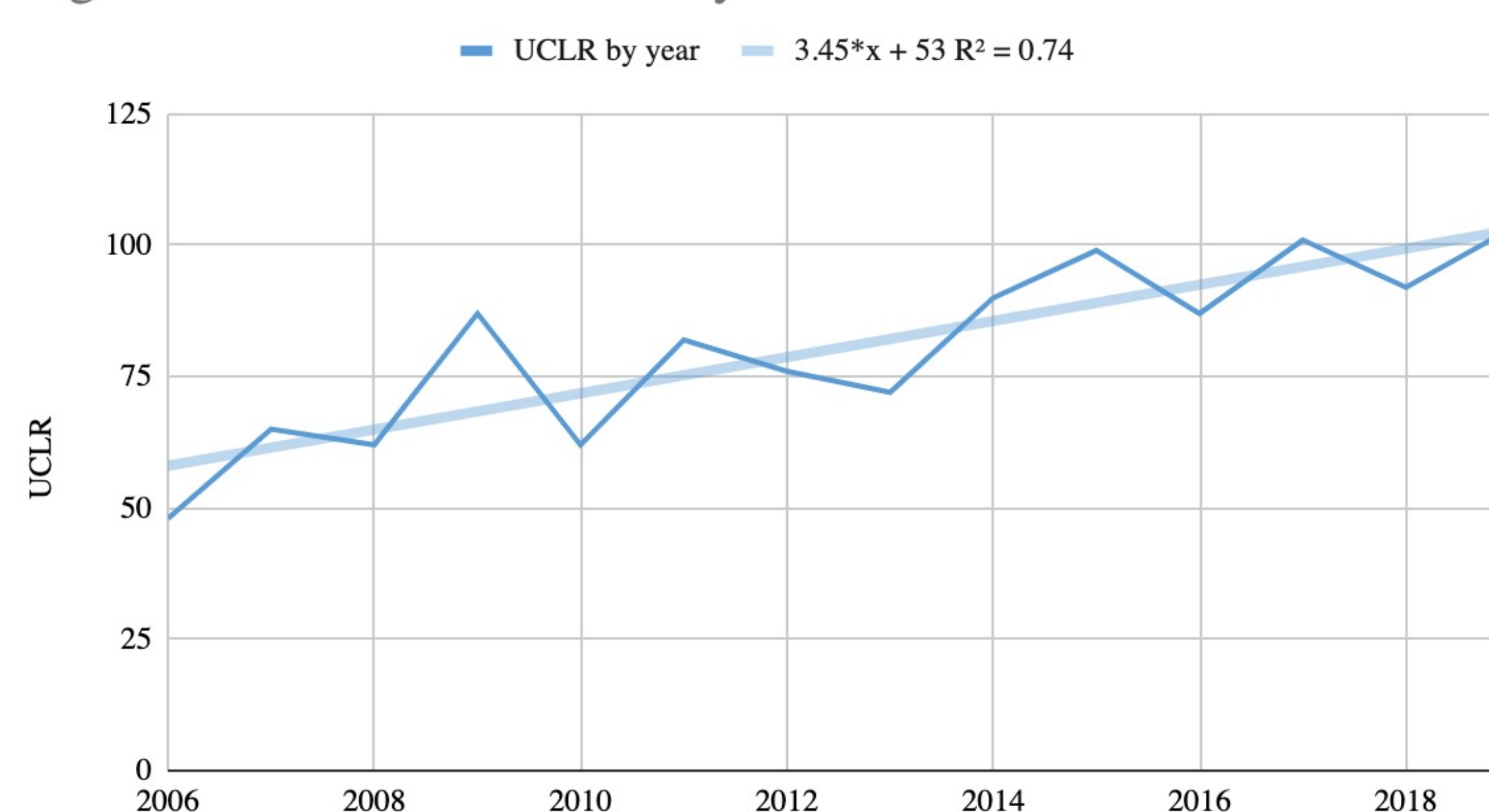


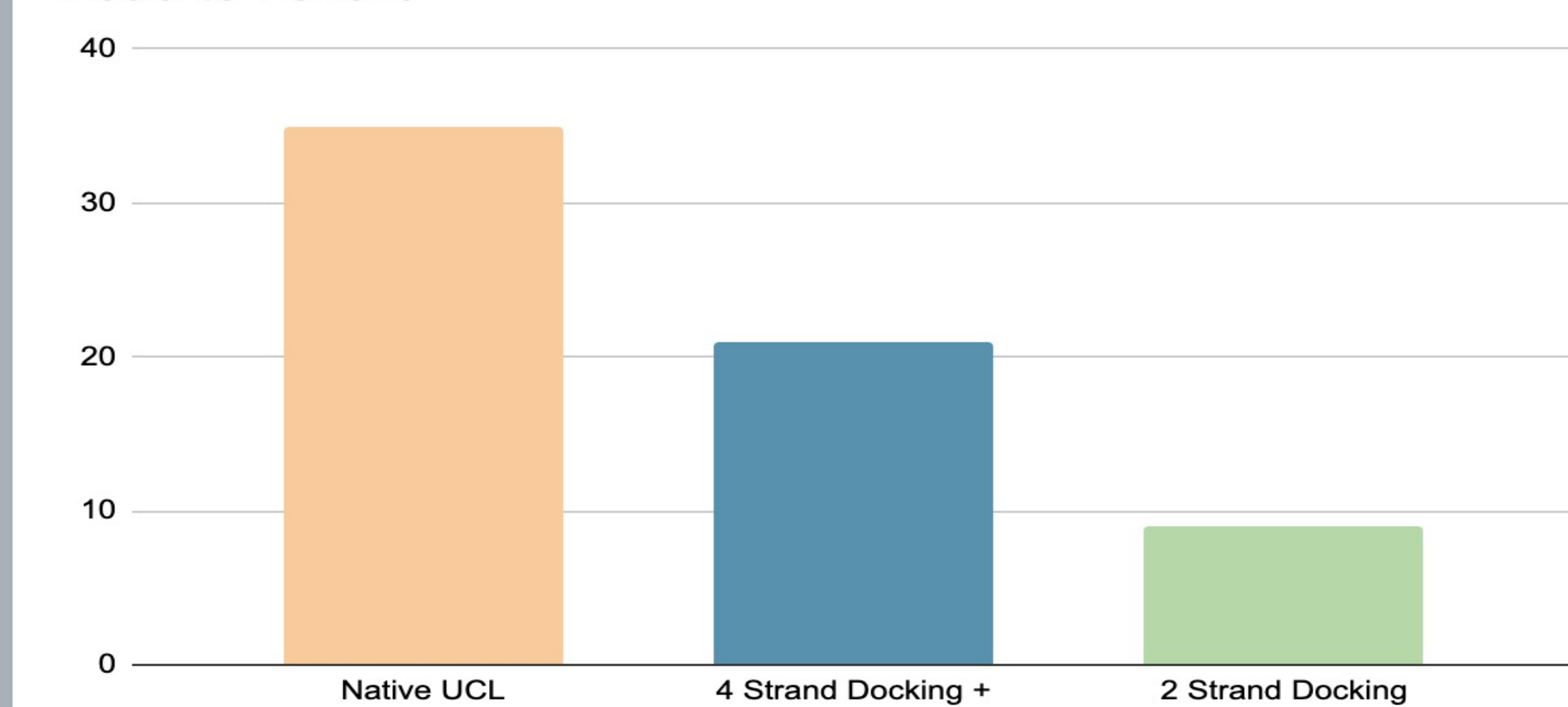
Figure 4 UCL Reconstructions by Year 2006-2019



Discussion

- The incidence of UCLR continues to increase yearly
- In our previous study, 92.9% of patients were satisfied with their outcome compared to 98.8% for this cohort. Combined this amounts to 95% of patients (462/487) who were satisfied with the outcome of their procedure from 2005-2018.
- Of the 163 respondents, **94.5% (154) had a Conway Score of Good or Excellent.** 152 patients returned to the same level or higher and 2 returned to a lower level. 9 Patients were unable to return to competitive pitching but threw recreationally. 2 of these patients had undergone revision UCLR.
- While the majority of these respondents were college athletes (59%), a large number of our cohort who were unable to be reached were MLB pitchers. Thus, these results are applicable more to college and high school athletes but less so MLB pitchers, even though they make up a large number of athletes undergoing UCLR.
- We reported on 8 female athletes who underwent UCLR adding to the sparsity of data about women and UCLR. Our last study had 34 female respondents. From 2005-2014, most of the female athletes were softball players, whereas from 2015-2018 competitive cheerleading was the most common sport.
- From 2005-2014, 59% of patients had an acute injury while 41% had more chronic or gradual presentation. This is consistent with what we saw from 2015-2018 with acute making up 62% of injuries compared to 38% of patients with gradual pain. This is closer to 1:1 in baseball pitchers which reflects the traumatic nature of many non-baseball UCL injuries seen in cheer, gymnastics, and football.
- Our average RTP of 12 months is consistent with what has been previously reported and the described rehab protocols.

Load to Failure



CONCLUSION

The Docking Plus Technique leads to reproducible return to play and patient satisfaction. The prototypical patient undergoing UCLR is a college male baseball pitcher. UCL outcomes data would benefit from more prospective studies and the creation of a nationwide UCLR database to draw conclusions about technique, graft type, risk factors, and many more relevant variables.