Letter to the Editor

Re: Wojtys EM. Hurray for Sports Medicine. *Sports Health* 2011;3(1):10.

Kaeding CC, Aros B, Pedroza A, et al. Allograft Versus Autograft Anterior Cruciate Ligament Reconstruction: Predictors of Failure From a MOON Prospective Longitudinal Cohort. *Sports Health* 2011;3(1):73-81.

Dear Dr. Wojtys,

I am writing to learn more in response to the excellent article by Kaeding et al.¹, and your related editorial.²

First, congratulations to you Dr. Wojtys on the successful launch of an important and educational journal, now in its third year. Congratulations also to Dr. Kaeding and his colleagues for their well-performed, clinically relevant investigation of a high level of evidence.

In your editorial², you appropriately celebrate the quality of the cited research,¹ stating that it “provides the best information available to help surgeons and patients choose between an autograft and an allograft,” and add that Figure 3 “should hang on the wall of examining rooms where physicians and patients are faced with these issues.” I agree that Kaeding’s Figure 3 is ideal for educating patients. However, before I hang it in my examining room, I have a few questions.

First, in the final paragraph of the results section, the authors describe two clinical examples of the equation used to derive their Figure 3.¹ However, the numeric data cited in the clinical examples does not seem to fit the “Probability of Retear” curve illustrated in the figure. Figure 3 is small and not represented on “graph paper,” so I could be wrong, but my first question is: can the authors clarify this apparent discrepancy between the figure and the examples?

Second, the vertical axis of Figure 3, which represents “Percent Risk of (Graft) Failure” is rendered on a scale from 0% to 25%. This could confuse some readers and most patients because it may result in an impression that the “Percent Risk of Failure” is

extremely high (near the top of the scale), and similarly could result in an impression that the difference in risk of failure between autograft and allograft is more extreme than the data indicate. My question is: might it be possible, in response to this letter, to consider reproducing the figure with a vertical axis scale from 0 to 100%? This could graphically represent the results in a manner that patients would have less risk of misinterpreting, bearing in mind that my intention is to follow the Editors recommendation that I hang the figure in my patient examination room.

Next, a question independent of Figure 3 regards the quality of the allograft tissue implanted. Meta-analysis of patellar tendon autograft versus patellar tendon allograft shows no significant differences between groups “when irradiated and chemically processed grafts were excluded from analysis.”³ In the Kaeding study, the combined consortium cohort reports 21 allograft failures. My third question is: how many of the 21 failed allografts were irradiated or chemically processed grafts?

I agree with the Editor that Kaeding et al. have published “an outstanding study that is a landmark in sports medicine.” I hope my questions are received in the intended spirit of helping readers, including me, have the most complete data and the clearest figure so we may use it to make clinical decisions and to educate our patients.

Thank you for your consideration,

James H. Lubowitz, MD
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REFERENCES

1. Kaeding CC, Aros B, Pedroza A, et al. Allograft versus autograft anterior cruciate ligament reconstruction: predictors of failure from a MOON prospective longitudinal cohort. *Sports Health* 2011;3(1):73-81.
2. Wojtys EM. Hurray for Sports Medicine. *Sports Health* 2011;3(1):10.
3. Krych AJ, Jackson JD, Hoskin TL, Dahm DL. A meta-analysis of patellar tendon autograft versus patellar tendon allograft in anterior cruciate ligament reconstruction. *Arthroscopy*. 2008;24(3):292-8.

Letter to the Editor Response

Editor,

We appreciate the comments of Dr. Lubowitz in his letter to the Editor regarding our paper “Allograft Versus Autograft Anterior Cruciate Ligament Reconstruction: Predictors of Failure From a MOON Prospective Longitudinal Cohort”. *Sports Health* 2011;3(1):73-81. He raises three questions that we would like to address.

Point 1. We agree that the size of the graph in the journal is small and that it would be hard to calculate percent risk of failure from that graph. If the graph is enlarged, the percent risk depicted in the graph does indeed fit the values obtained in the equation. The graph was included as a graphic representation of the overall trend of risk showing the risk is greater at the younger ages and also greater comparing autografts with allografts.

Point 2. Again due to the size of the graph, we felt that ‘zooming in’ on the part of the graph that represents risk was justifiable since we clearly marked the y axis with the values. We have replicated the graph both to include grid lines and extending the y axis from 0 to 100% (see new figure at right). We also extended the x axis to include zero as well to accurately represent age. We agree that it would be possible with the ‘zoomed in’ graph for someone to potentially misinterpret the percent risk.

Point 3. We agree that the quality of the allograft tissue is a valid topic and that the type of graft, donor demographics, chemical exposure, irradiation status – no, low or high dose and how it is processed are all variables very worthy of evaluation. Unfortunately, this was not an aim of this study and as such the study was not powered to answer these questions. We were limited with our sample size of allograft failures and did not have enough power to make any meaningful statistical evaluation of the various allograft tissue preparations. A future study evaluating the influence of anatomic, demographic

and processing characteristics of allograft tissue on retear risk would be a valuable addition to the literature.

We appreciate the feedback and questions and as is often the case, our study has raised further questions that need to be investigated. We hope that future studies will provide additional insight into allograft tissue use in ACL reconstructive surgery.

Sincerely,

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