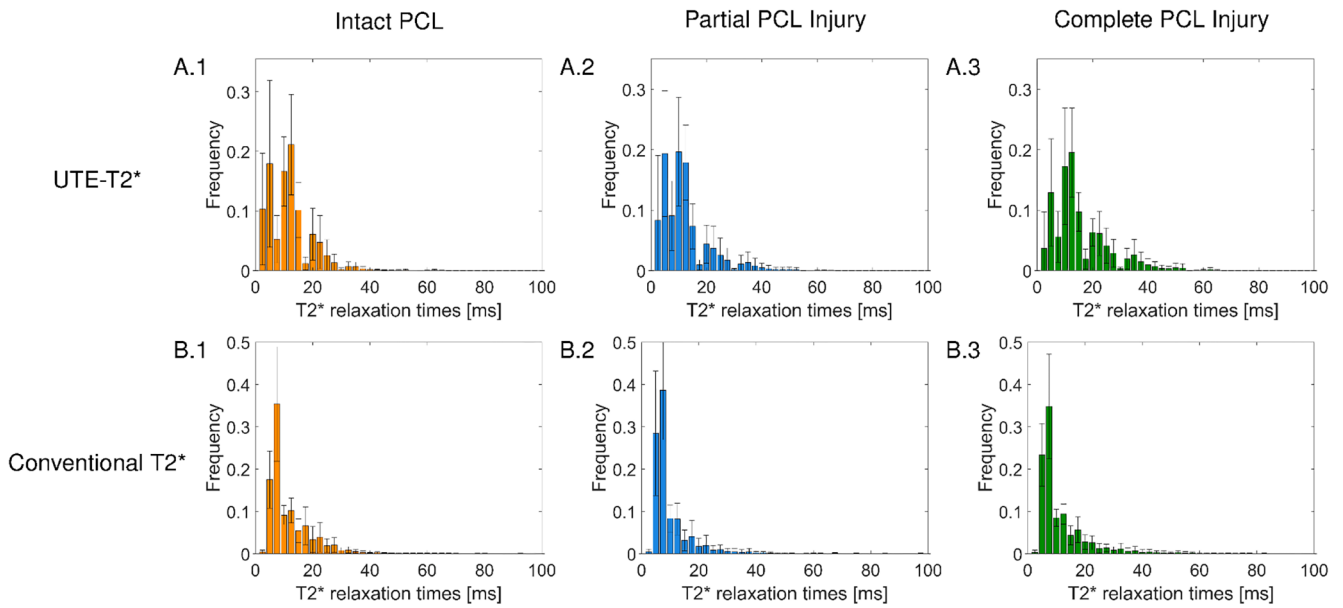**Figure S1** 2D UTE-T2* and conventional T2* maps of the PCL as a function of its condition. In this representative knee joint, spatially resolved quantitative UTE-T2* maps (A) and conventional T2* maps (B) of the central PCL are displayed in the intact (A1, B1), partially PCL-injured (A2, B2), and completely PCL-injured (A3, B3) conditions. UTE-T2* maps and conventional T2* maps were overlaid onto the corresponding morphologic images with echo times of 12.0 ms [UTE-T2*] and 4.9 ms [conventional T2*]. Pixel-wise, T2* relaxation times are color-coded and range from 0 to 30 ms. Same knee joint as in *Figure 2*. PCL, posterior cruciate ligament.

Figure S2 Histograms of individual voxels' T2* relaxation times as acquired using the UTE-T2* and conventional T2* sequences as a function of PCL condition. Displayed are the frequencies of individual voxels' T2* relaxation times in all specimens. T2* relaxation times are scaled at intervals of 2.5 ms. Bars indicate means, while whiskers indicate standard deviations. Intact (A1, B1), partially PCL-injured (A2, B2), and completely PCL-injured (A3, B3) conditions. PCL, posterior cruciate ligament.