Descriptive Epidemiology Study of the Justifying Patellar Instability Treatment by Early Results (JUPITER) Cohort
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INTRODUCTION:
Patellar instability is a common injury in young patients and can lead to significant morbidity and arthritis. Its management is controversial. JUPITER (Justifying Patellar Instability Treatment by Early Results) is a hypothesis-driven, multicenter, multiaimed, prospective cohort study developed to obtain sufficient subjects to better describe clinical characteristics and predictors of clinical outcomes in the young patellar instability population.
The purpose of this study is to describe the formation of JUPITER and provide preliminary descriptive analysis of patient demographics and clinical features for the initially enrolled patients in this prospective cohort.

METHODS:
This is a cross-sectional study; level of evidence, 2. After training and institutional review board approval, surgeons began enrolling patients between 10-30 years of age who had sustained a patellar dislocation event. Information regarding patient demographics, dislocation history, physical exam characteristics, and baseline validated patient-reported outcome scores were collected.

RESULTS:
As of January 1, 2019, 21 surgeons from 12 sites had prospectively enrolled a total of 840 patients with patellar instability. 61% were female and the mean age of the cohort was 17.3 years. In total, 66% knees were enrolled in the operative group and 34% in the nonsurgical group. Some 55% of knees reported that they had more than 1 dislocation (operative group 73%; nonsurgical group 27%, p<0.001). Operative treatment was indicated in 39% of first-time dislocators and 85% of recurrent dislocators (p<0.001).

DISCUSSION AND CONCLUSION:
The JUPITER Group has been able to accumulate the largest prospectively collected patellar instability database to date. Over half of patients in this group reported they sustained more than one dislocation. Operative management was indicated in 39% of first-time dislocators, 50% of which had sustained an osteochondral fracture, and 85% of recurrent dislocators. Recurrent dislocators were more likely to have positive physical exam findings on both the affected and contralateral knee.