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The Anterior Notch Area for 3 Types of Notch Geometry, an Individualized Approach for Choosing the ACL Graft Size

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ABSTRACT
Background: The intercondylar notch (ICN) is an important element of knee morphometry, in close relation to the anterior cruciate ligament (ACL). Aim: To find the average are of the anterior notch in each ICN specific shape (A-, W-, or U-shape).
Methods: Magnetic resonance imaging (MRI) scans were independently analyzed by two experts, one orthopedic surgeon and one imaging physician. In all cases, the following measurements were done according to the existing definitions: ICN type, aICN area.
Results: 65 cases (A-35.4%, W-26.2%, U-38,5%) were included in study; A and W notch types have smaller aICN areas, while U-type notch has bigger aICN area.
Conclusion: The anterior intercondylar notch area varies significantly for each specific shape (A-, W, or U-shape), and does not corelates with height. This needs to be considered during ACL reconstruction, when choosing graft size.
Key words: intercondylar notch, ACL graft, magnetic resonance imaging