M U N I

COMMENTARY TO HABILITATION THESIS[1]

The habilitation thesis named “Biomechanics of the knee joint after the replacement of the anterior cruciate ligament with modern techniques in athletes” was created to answer the question of what is the stability of the knee joint after various types of reconstructions of the anterior cruciate ligament at the time of surgery, subsequently two years after the operation in correlation with the contralateral healthy knee joint, and to verify the subjective feelings of patients in relation to the given procedure. The practical impact on the physically active population was to determine the ideal algorithm for treatment of an anterior cruciate ligament injury of the knee. Several groups of patients after LCA injury were studied and the most stable LCA reconstruction technique was determined. Most of the work on this study was created by the author of this work.

[1] **Komzak, M.* (corresponding author)***, Hart, R., Okal, F., & Safi, A. (2013). AM bundle controls the anterior-posterior and rotational stability to a greater extent than the PL bundle—A cadaver study. *Knee*, *20*(6), 551–555. https://doi.org/10.1016/j.knee.2013.03.012

Experimental work (%)	Supervision (%)	Manuscript (%)	Research direction (%)
95	95	95	95

[1] The commentary must correspond to standard expectations in the field and must include a brief characteristic of the investigated matter, objectives of the work, employed methodologies, obtained results and, in case of co-authored works, a passage characterising the applicant’s contribution in terms of both quality and content.

[2] **Komzak, M.*(corresponding author)*,** Hart, R., Okal, F., & Safi, A. (2012). Does the posterolateral bundle influence rotational movement more than the anteromedial bundle in anterior cruciate ligament reconstruction? A CLINICAL STUDY. *Journal of Bone and Joint Surgery-British Volume*, *94B*(10), 1372–1376. https://doi.org/10.1302/0301-620X.94B10.28673

Experimental work (%)	Supervision (%)	Manuscript (%)	Research direction (%)
95	95	95	95

[3] **Komzak, M.*(corresponding author)***, Hart, R., Smid, P., & Puskeiler, M. (2014). The Effect of Central Anatomical Single-Bundle versus Anatomical Double-Bundle Reconstruction of the Anterior Cruciate Ligament on Knee Stability. A Clinical Study. *Acta Chirurgiae Orthopaedicae Et Traumatologiae Cechoslovaca*, *81*(4), 276–280.

Experimental work (%)	Supervision (%)	Manuscript (%)	Research direction (%)
95	95	95	95

[4] **Komzak, M.*(corresponding author)*.** (2018). Rotační stabilita kolenního kloubu u sportovců po augmentaci předního zkříženého vazu z m.gracilis -- biomechanická studie 2 roky po operaci. *Medicina sportiva Bohemica et Slovaca*, *27(1)*, 26-37.

Experimental work (%)	Supervision (%)	Manuscript (%)	Research direction (%)
100	100	100	100

[5] **Komzak, M.*(corresponding author)*,** Hart, R., Feranec, M., Smid, P., & Kocova, R. (2018). In vivo knee rotational stability 2 years after double-bundle and anatomic single-bundle ACL reconstruction. *European Journal of Trauma and Emergency Surgery*, *44*(1), 105–111. https://doi.org/10.1007/s00068-017-0769-7

Experimental work (%)	Supervision (%)	Manuscript (%)	Research direction (%)
95	95	95	95

[6] **Komzak, M.*(corresponding author)***, Hart, R., Smid, P., Puskeiler, M., & Jajtner, P. (2015). The Effect of Platelet-Rich Plasma on Graft Healing in Reconstruction of the Anterior Cruciate Ligament of the Knee Joint: Prospective Study. *Acta Chirurgiae Orthopaedicae Et Traumatologiae Cechoslovaca*, *82*(2), 135–139.

Experimental work (%)	Supervision (%)	Manuscript (%)	Research direction (%)
90	90	95	90