Review of: "L4-L5 Anatomy Classification System for Lateral Lumbar Interbody Fusion"

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Potential competing interests: No potential competing interests to declare.

1. The L4-L5 level presents challenges when using the LLIF (lateral lumbar interbody fusion) approach due to the anterior shift of the lumbar plexus and the potential presence of major blood vessels between the psoas muscle and vertebral body. These factors limit the safe working zone for LLIF at L4-L5, making it impractical in some cases. To address this, researchers have developed classifications, such as the Moro zone categorization, to identify patients at a higher risk of neurological deficits and facilitate decision-making in lateral lumbar interbody fusion procedures.
2. When the patient is positioned in the OR, the positions of key structures such as the psoas margin, lumbar plexus, and major vessels will be different from the anterior shift of the lumbar plexus, as well as the potential presence location of major blood vessels between the psoas muscle and vertebral body in prone position. As a result, the authors should specify if the patient's posture differs between the supine position used for MRI and the position used in the OR.
3. The next investigation should compare and classify essential structures, such as the psoas margin, lumbar plexus, and major vessels, in the same patient position.