

UCL injury: the Moving valgus stress test

The patient. A 19-year-old baseball pitcher has pain on the inner side of his elbow when he throws.

Starting chance. For this exercise, assume a 50% chance of UCL injury before testing. This is a teaching assumption, not a published figure.

Question. You suspect an injury to the ulnar collateral ligament (UCL). Which result of the moving valgus stress test is more useful?

Teaching case: Answer

The test. Shoulder at 90° abduction and full external rotation. From full elbow flexion, hold a steady valgus force and extend the elbow briskly. Positive: The familiar medial pain, worst between about 120° and 70° of flexion.

Why this test. The library rates this test as ‘best used to rule out’ for UCL injury. Sensitivity 98%, specificity 75%; LR+ 3.94, LR– 0.02.

Result	Likelihood ratio	Chance after the test
Positive	3.94	about 80%
Negative	0.02	about 2%

Take-home point. The negative result is the stronger one: it brings the chance down from 50% to about 2%. A positive result lifts it to about 80%, which is not enough to confirm the condition on its own.

Figures: Sciascia AD, Bowman EN, Camp C, et al. Clinical Utility of the Moving Valgus Stress Test and Milking Maneuver for Medial Ulnar Collateral Ligament Injuries of the Elbow. Am J Sports Med. 2026;54(8):1993-2002. They describe the patients in that study, not every patient. Worked with odds: starting odds × likelihood ratio = odds after the test.