

17TH INTERNATIONAL CONFERENCE OF THE
RESEARCH INSTITUTE OF OPHTHALMOLOGY

RIO 2025

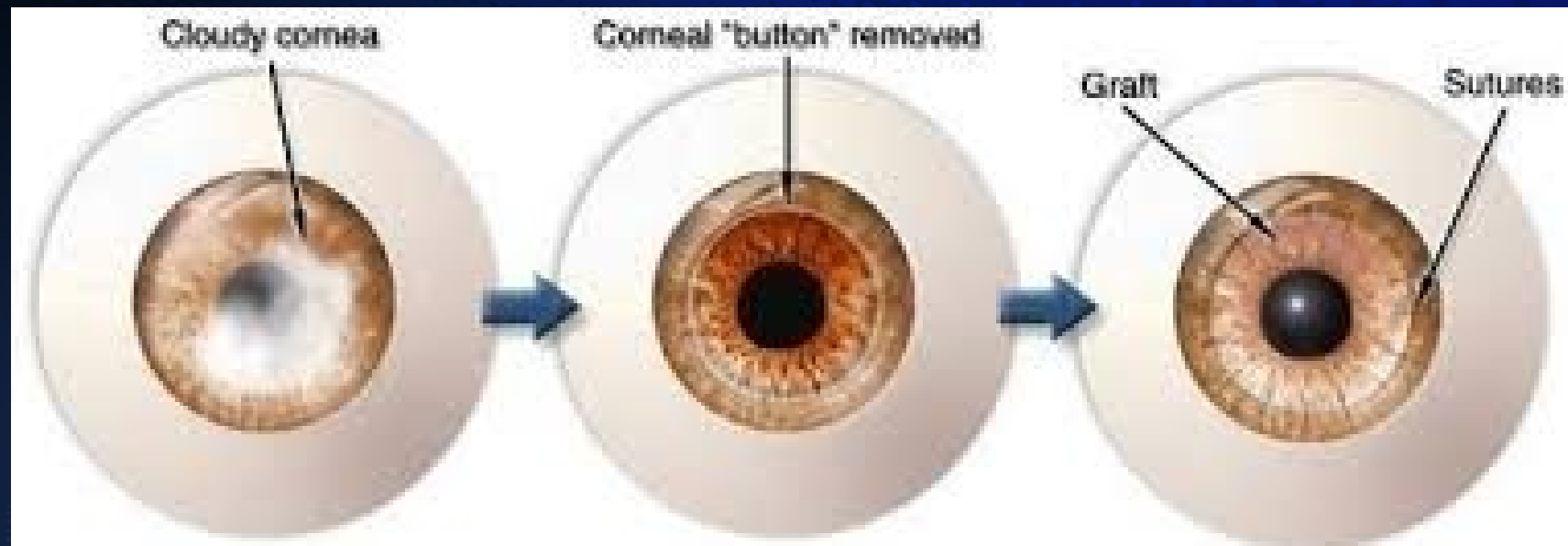
*Anterior Segment Eye Diseases
Current Status & Future Directions*



PK: Cutting and stitching

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Cornea Unit RIO





Cutting

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graph LR; A[Cutting] --- B[manual]; A --- C[microkeratome]; A --- D[Femtosecond laser];
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The diagram consists of a central blue hexagon labeled 'Cutting'. To its right is another blue hexagon labeled 'manual'. Below the 'manual' hexagon is a third blue hexagon labeled 'microkeratome'. To the left of the 'microkeratome' hexagon is a fourth blue hexagon labeled 'Femtosecond laser'. The hexagons are arranged in a cluster, with the 'Cutting' hexagon being the largest and most prominent. The background is a dark blue gradient with a subtle pattern of small white dots.

manual

microkeratome

Femtosecond
laser

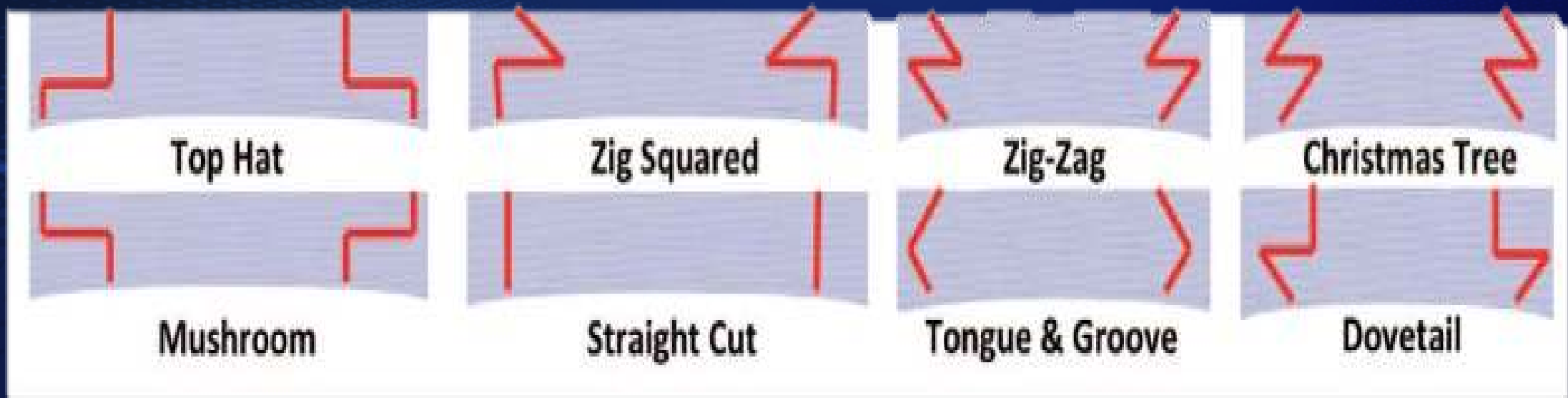
microkeratome

- SALK and DSAEK
- Artificial chamber



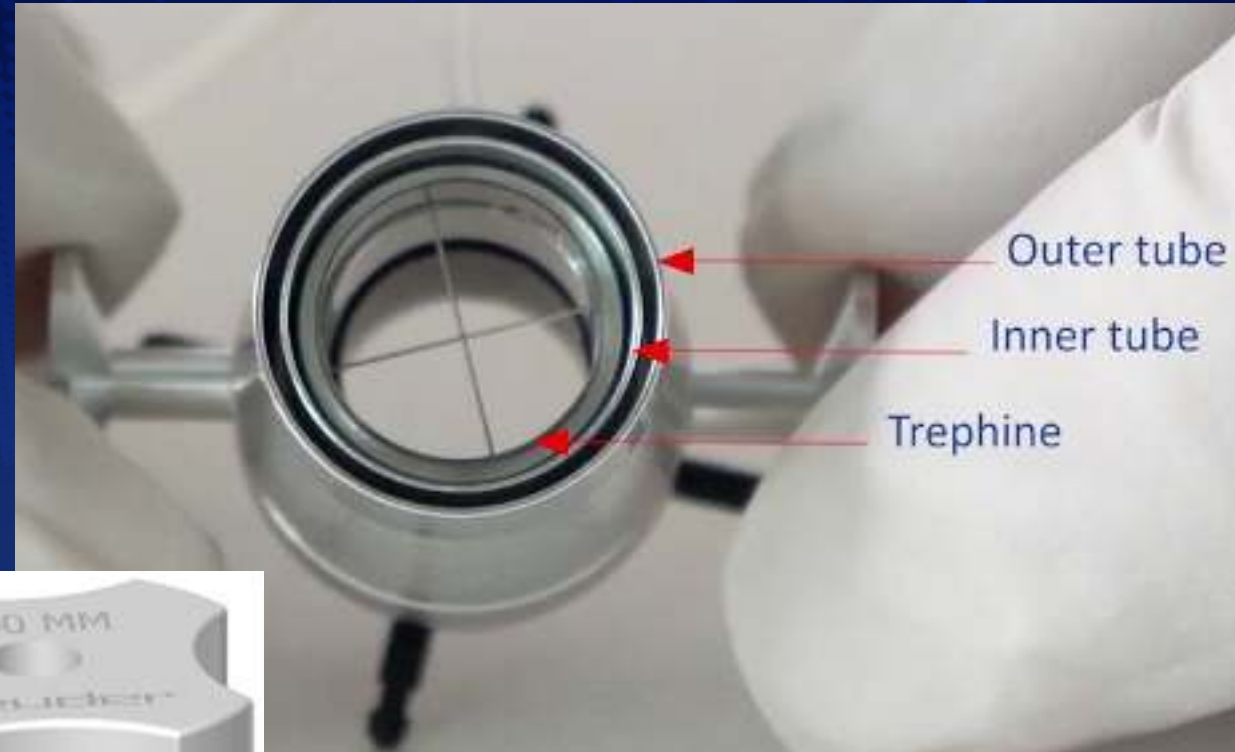
Femtosecond Laser

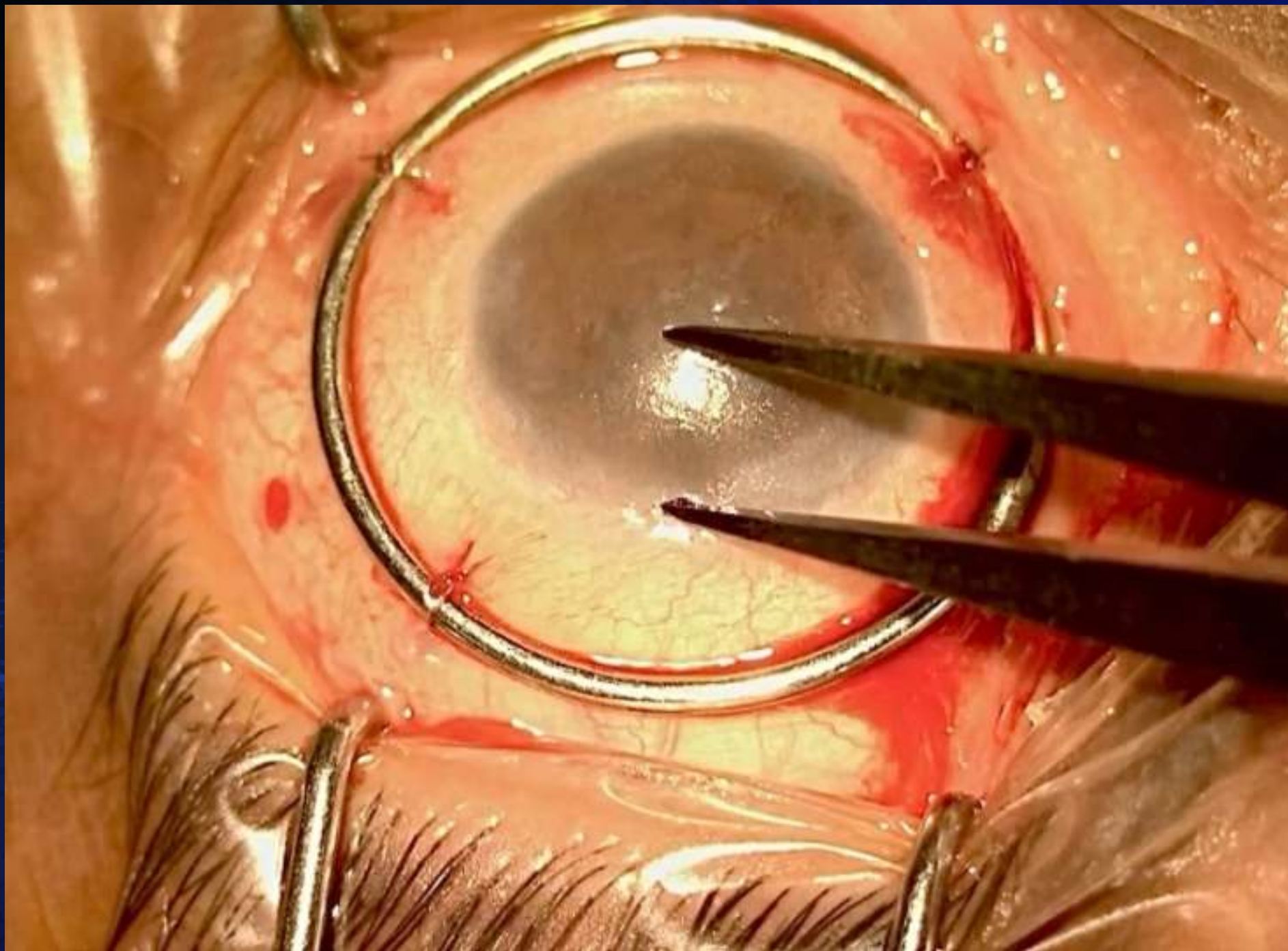
- PKP, DALK, SALK, DSAEK
- Precise, reproducible, better fit.
- Artificial chamber



Manual

- Donor graft cut with handheld Punch at a size 0.25 to 0.50mm larger than host cut
- Host cornea cut with vacuum assisted trephine

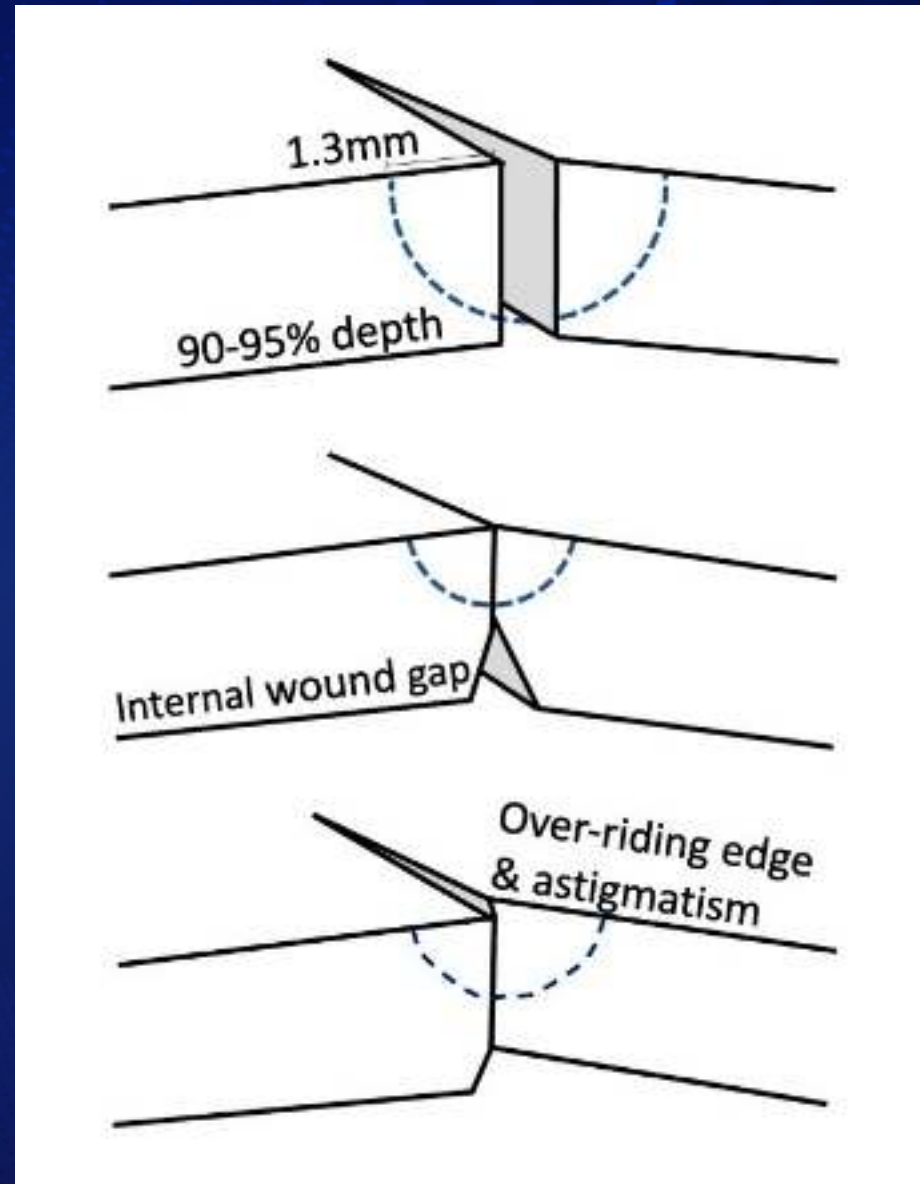


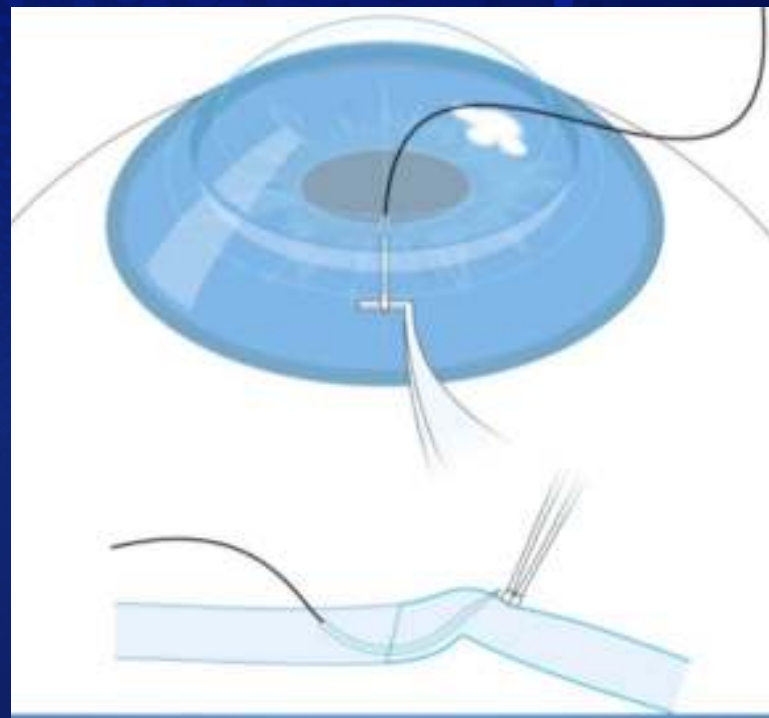
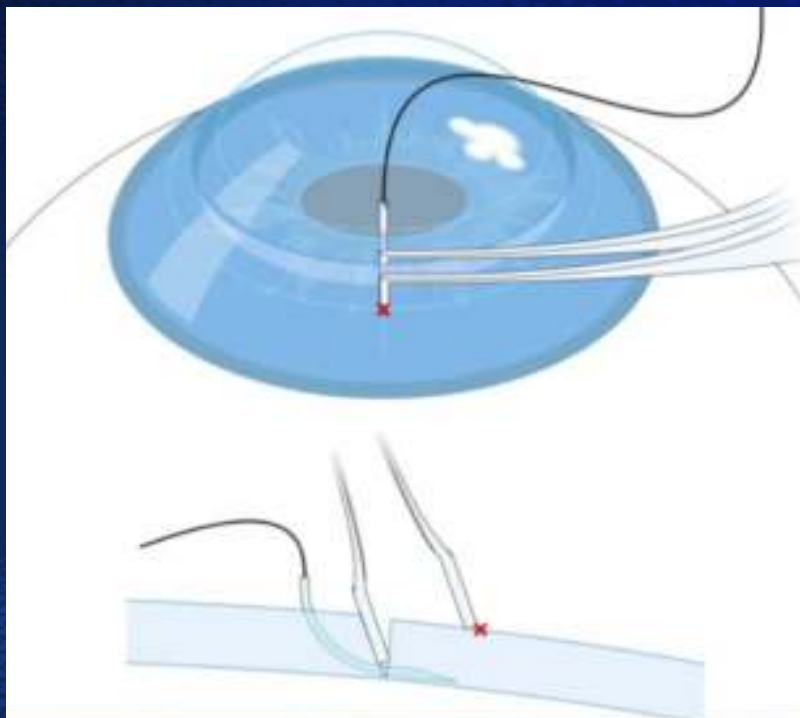
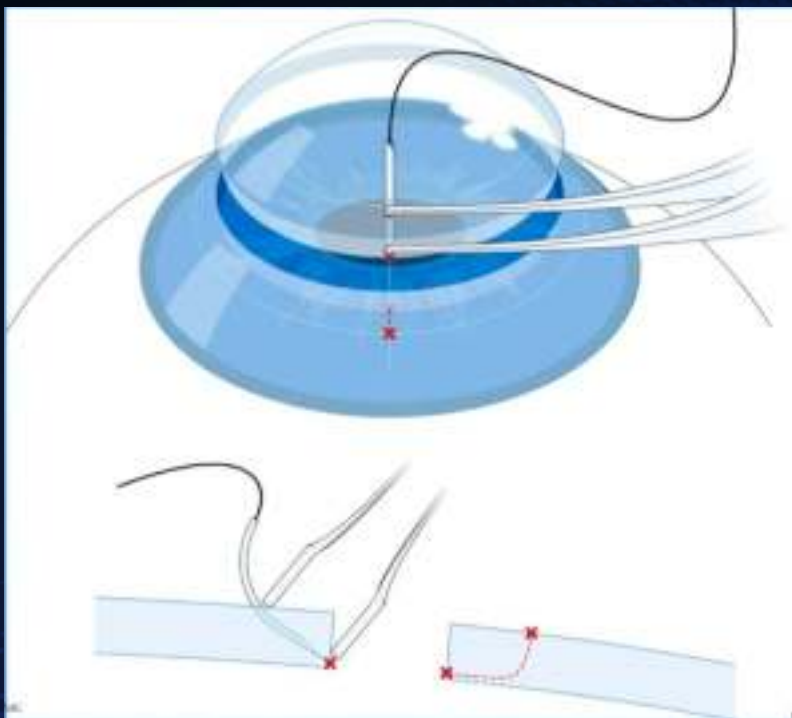


Stitching

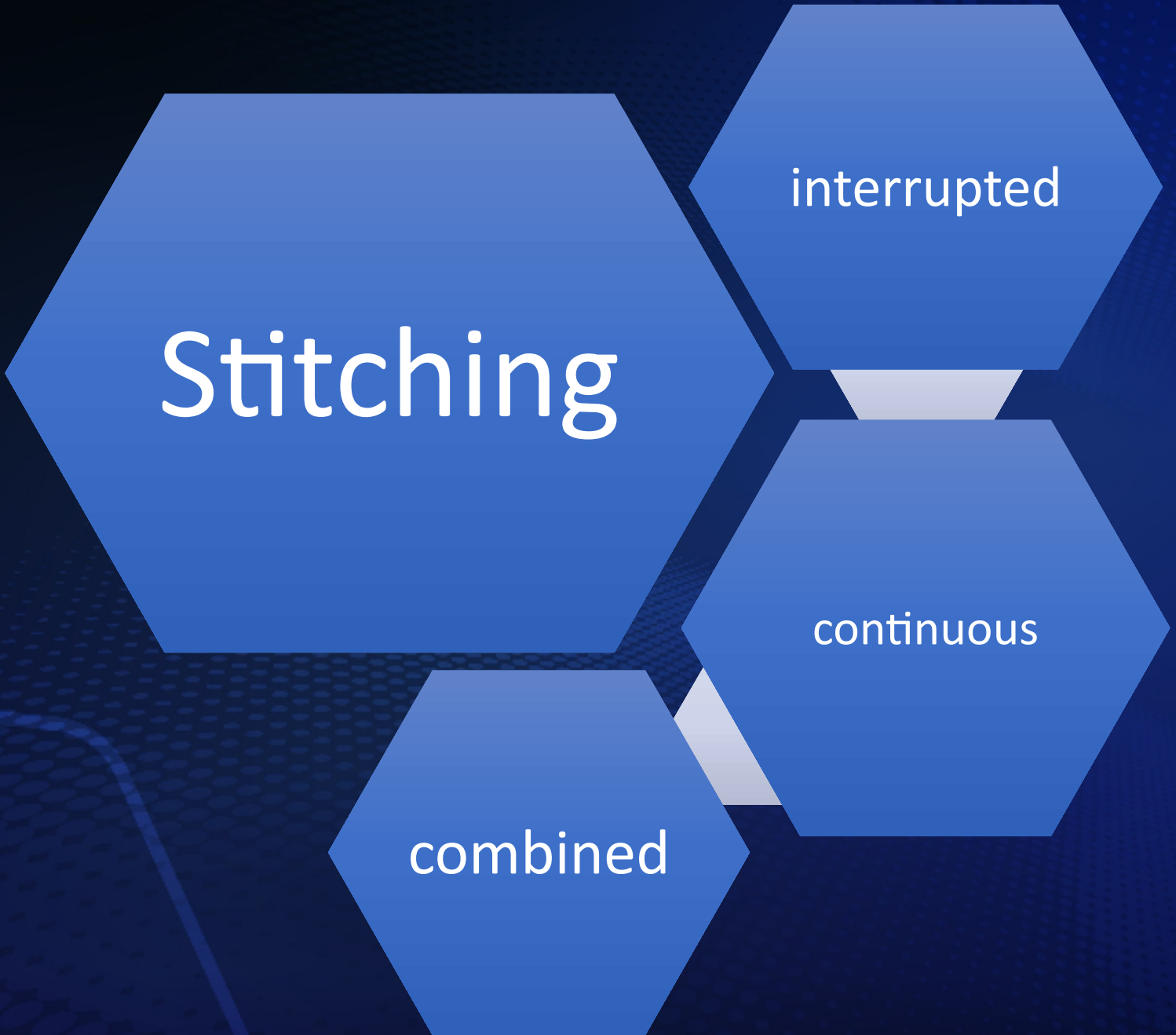
- Wound in anatomical position
- Water tight
- Less astigmatism
- Long term stability

- Nylon 10-0
- 1.3mm both sides
- 95% depth
- Radial
- 4 cardinal (12-6-3-9) o'clock
- 3-1-1 knots
- Buried donor side





Stitching

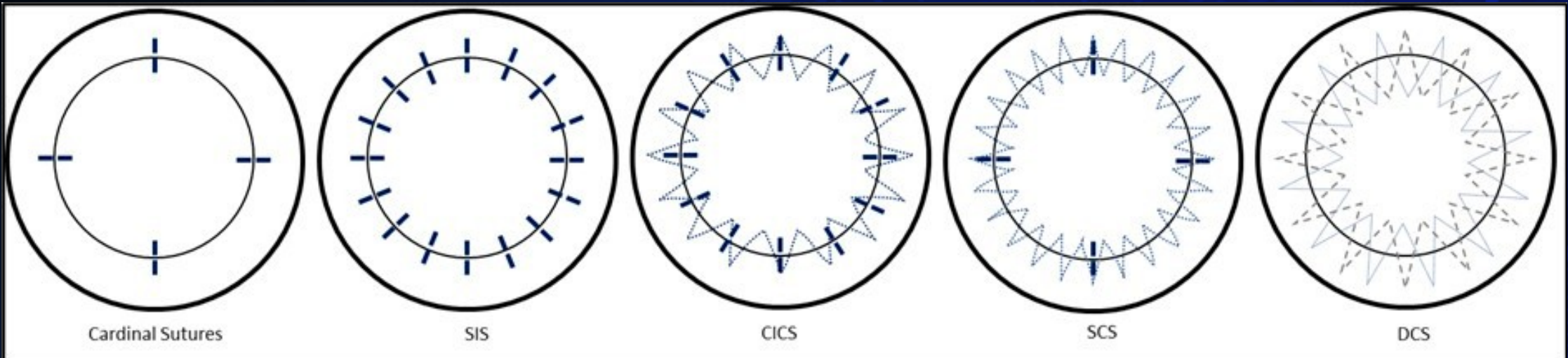


A diagram illustrating three types of stitching. A large blue hexagon on the left contains the word "Stitching". To its right, three smaller blue hexagons are arranged in a triangular pattern, each containing a type of stitching: "interrupted" at the top, "continuous" at the bottom right, and "combined" at the bottom left. The hexagons are connected by small white trapezoidal shapes.

interrupted

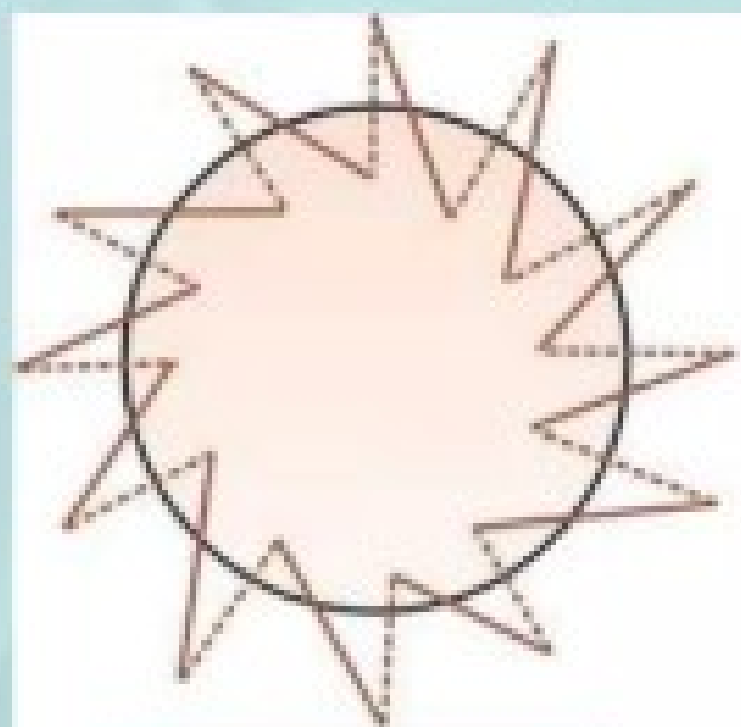
continuous

combined

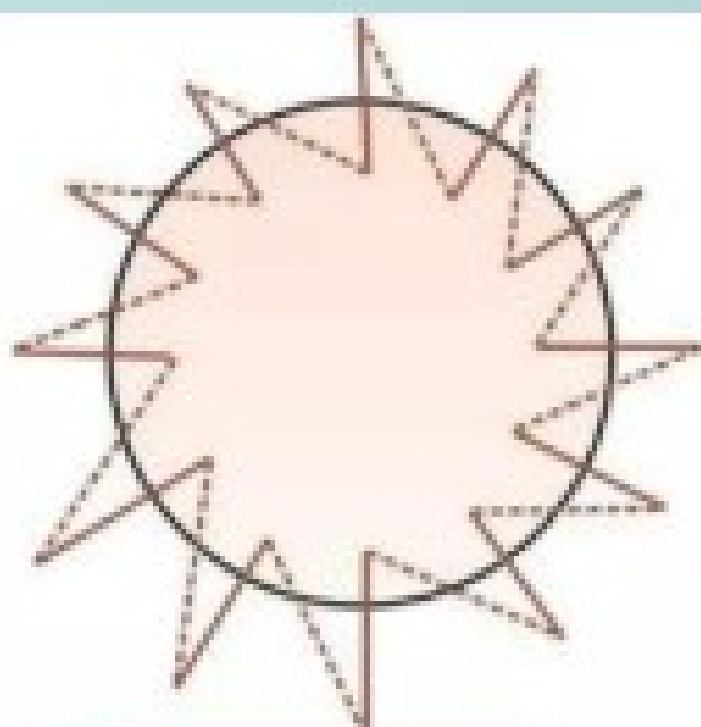


- Higher astigmatism
- No risk of dehiscence
- Selective removal

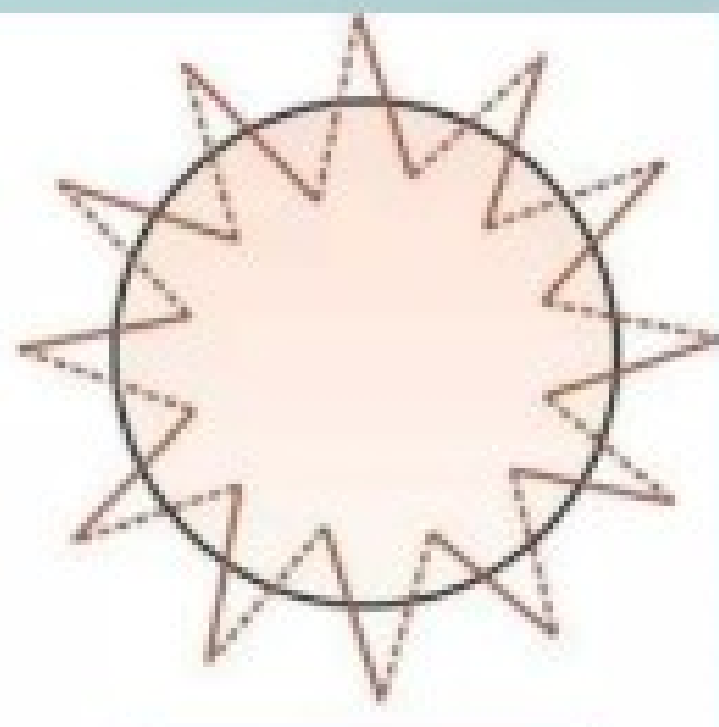
- Less astigmatism
- higher risk of dehiscence



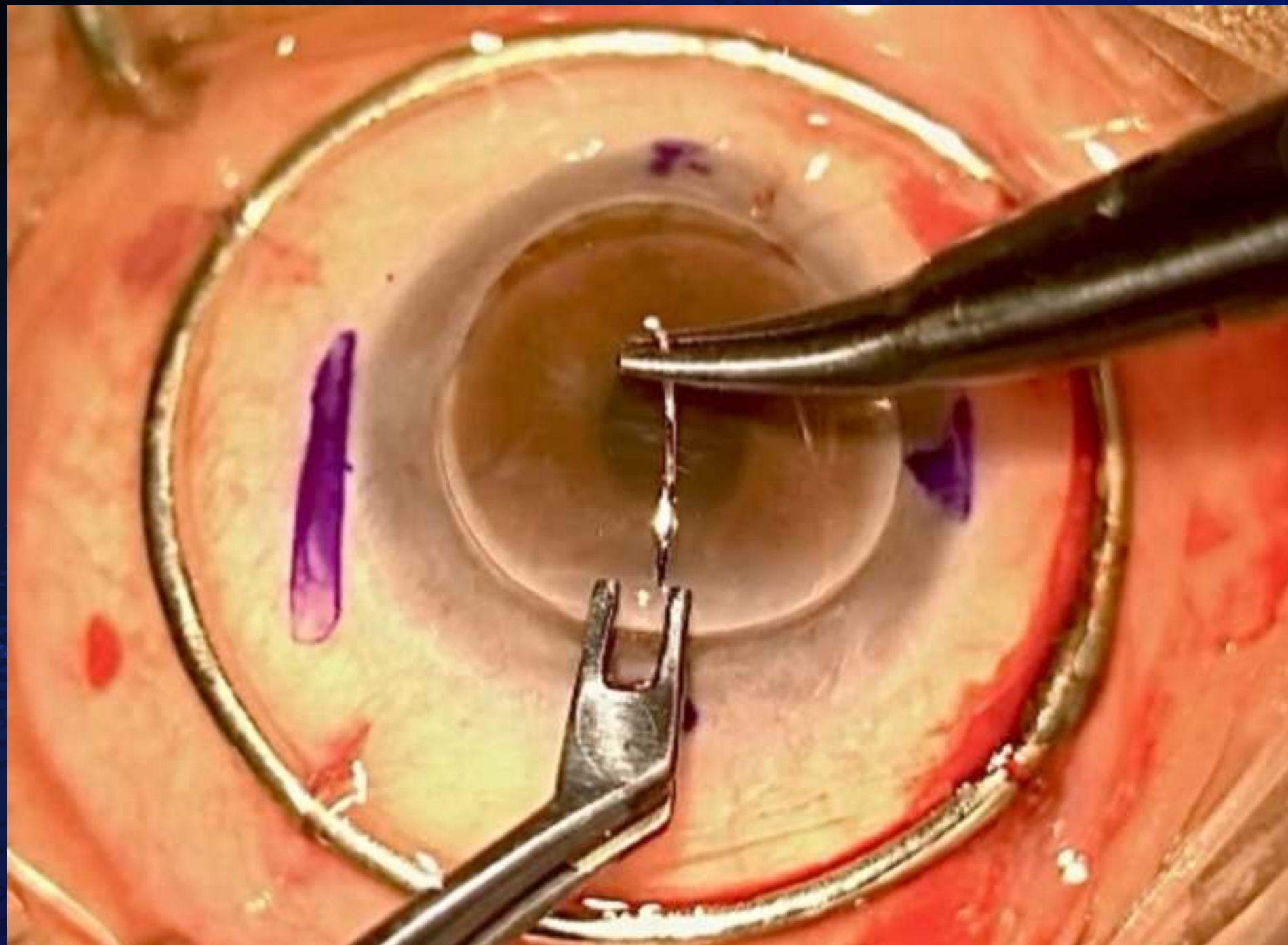
Torque



Anti torque



No torque



THANK YOU