The Effect of Retinal Scaffold Modulus on Performance During Surgical Handling

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Retinal Degeneration Results in Photoreceptor Cell Death

Healthy     Diseased     Replacement Therapy
Mechanical properties may affect both surgical and cellular aspects
PEGDMA samples have wide range of mechanical properties
Developed surgical tool allows for minimally invasive procedure
In vitro surgical handling demonstrates lower modulus limit

- 1-10 scale on overall handleability (tearing, fracture, fragility, etc.), 10 is the best
Are the *in vitro* experiments representative of a retinal transplantation procedure?
Ex vivo study follows developed surgical procedure
Ex vivo trial validates surgical handling results

![Ex vivo trial results graph](image_url)
Scaffold stiffness affects performance in surgical setting

- Microstructural differences
- Optical Properties
- 35 kPa Lower Limit