**Submission ID #: 65508**
**Scriptwriter Name: Pallavi Sharma**
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# Title: Full-Endoscopic Transforaminal Approach for Lumbar Discectomy

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# Author Questionnaire

**1.** We have marked your project as author-provided footage, meaning you film the video yourself and provide JoVE with the footage to edit. JoVE will not send the videographer. Please confirm that this is correct.

√ Correct

**2. Microscopy**: Does your protocol require the use of a dissecting or stereomicroscope for performing a complex dissection, microinjection technique, or something similar? **Yes**
Authors: Please create scope videos of the shots labeled as SCOPE and upload the files to your project page as soon as possible:
https://review.jove.com/files_upload.php?src=19979988

**SCOPE: 2.1.2, 2.2.2**

**3. Software:** Does the part of your protocol being filmed include step-by-step descriptions of software usage? **No**

**4. Proposed filming date:** To help JoVE process and publish your video in a timely manner, please indicate the proposed date that your group will film here:

When you are ready to submit your video files, please contact our Content Manager, Utkarsh Khare.

**Current Protocol Length**

Number of Steps: 03
Number of Shots: 08

# Introduction

**NOTE: AUTHORS DID NOT FILM THE INTRODUCTION**

~~**REQUIRED:** What is the scope of your research? What questions are you trying to answer?~~

1.1. ~~**Cafer Ikbal Gulsever:** Our research focuses on the full-endoscopic transforaminal approach for lumbar discectomy, evaluating its safety, effectiveness, and advantages over conventional surgical techniques.~~

1.1.1. ~~INTERVIEW: Named talent says the statement above in an interview-style shot, looking slightly off-camera. *Suggested B.roll:2.1.2*~~

~~What are the current experimental challenges?~~

1.2. ~~**Cafer Ikbal Gulsever:** A major challenge is the steep learning curve associated with full-endoscopic techniques, requiring surgeons to master specific anatomical and procedural nuances.~~

1.2.1. ~~INTERVIEW: Named talent says the statement above in an interview-style shot, looking slightly off-camera. *Suggested B.roll:2.2.1*~~

~~What research gap are you addressing with your protocol?~~

1.3. ~~**Cafer Ikbal Gulsever:** We address the need for minimally invasive lumbar surgery options that reduce tissue damage and postoperative complications compared to traditional discectomy methods.~~

1.3.1. ~~INTERVIEW: Named talent says the statement above in an interview-style shot, looking slightly off-camera. *Suggested B.roll:2.3.1*~~

~~What advantage does your protocol offer compared to other techniques?~~

1.4. ~~**Cafer Ikbal Gulsever:** Our protocol reduces muscle retraction and bone removal, preserving spinal stability, minimizing postoperative pain, and enabling quicker patient mobilization.~~

1.4.1. ~~INTERVIEW: Named talent says the statement above in an interview-style shot, looking slightly off-camera.~~

**Ethics Title Card**
This research has been approved by the Institutional Review Board (IRB) at Mount Sinai.
Written informed consent was obtained from the participants

# Protocol

## 2. Lumbar Discectomy Using Full-Endoscopic Transforaminal Approach

**Demonstrator:** Cafer Ikbal Gulsever

2.1. To begin, introduce an endoscope through a working sleeve **[1]** and observe the annulus fibrosis, posterior longitudinal ligament, and epidural fat tissue **[2].**

2.1.1. WIDE: Talent introduces the endoscope through the working sleeve.

2.1.2. SCOPE: The annulus fibrosis, posterior longitudinal ligament, and epidural fat tissue are being seen.
NOTE: Shot not provided. Please add missing media title card

2.2. Now rotate the working sleeve and the endoscope towards the cranial aspect **[1]** to facilitate a clear view of the vessels, adipose tissue, and ligaments within the intervertebral foramen **[2].** Then, remove the disc fragment using the Kerrison punch and the rongeur **[3].**

2.2.1. Talent rotates the working sleeve and the endoscope towards the cranial aspect.

2.2.2. SCOPE: JOVE 65508 Transforaminal.mp4 00.01 – 00.15

2.2.3. SCOPE: JOVE 65508 Transforaminal.mp4. 00.58 – 01.18

2.3. Evacuate the disc space utilizing the existing annulus defect with a rongeur **[1]**. Then, seal the evacuated area and the margins of the annulus defect by coagulation to avert any recurrence **[2].** Use a singular 3-0 (*Three-O)* suture for closing the skin incision **[3-TXT].**

2.3.1. SCOPE: JOVE 65508 Transforaminal.mp4 01.20 – 01.31

2.3.2. SCOPE: JOVE 65508 Transforaminal.mp4 . 01.33 – 01.47

2.3.3. Talent sutures the surgical site. **TXT: Make sure there is no drainage present**

# Results

**3. Results**

3.1. The preoperative MRI *(M-R-I)* scans revealed a left paracentral extruding disc herniation that was causing compression on the left L5 nerve root **[1].**

3.1.1. LAB MEDIA: Figure 1 *Video editor: Please emphasize Figures 1A and C*

3.2. The postoperative MRI scans demonstrated successful decompression of the left L5 nerve root **[1].**

3.2.1. LAB MEDIA: Figure 1 *Video editor: Please emphasize Figures 1B and D*

**Pronunciation Guide:**
**1. annulus fibrosus**
**Pronunciation link:**
**https://www.merriam-webster.com/medical/annulus%20fibrosus YouGlish+10Merriam-Webster+10YouGlish+10YouTube+11Merriam-Webster+11TheFreeDictionary.com+11**
**IPA: /ˈæn.jʊ.ləs faɪˈbroʊ.səs/**
**Phonetic Spelling: AN-yuh-lus fik-BROH-sus**

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**2. transforaminal**
**Pronunciation link:**
**https://www.howtopronounce.com/transforaminal Merriam-WebsterHow To Pronounce+1Glosbe+7How To Pronounce+7How To Pronounce+7**
**IPA: /ˌtrænz.fəˈræm.ɪ.nəl/**
**Phonetic Spelling: tranz-fuh-RAM-ih-nul**

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**3. Kerrison punch**
**Pronunciation link —Unfortunately Merriam-Webster does not have a dedicated entry; no confirmed link found.**
**IPA (American): /ˈkɛrɪsən pʌntʃ/**
**Phonetic Spelling: KER-ih-sun punch**