

# Anterolateral retroperitoneal approach

## Retroperitoneal (Anterolateral) Approach to the Lumbar Spine

### Indications

Can access L1 to sacrum  
 slightly more difficult to reach L5-S1 disk space than transperitoneal approach  
 bifurcation of great vessels anterior to L4 vertebral body

Indications

- psoas abscess drainage (without risk of postoperative ileitis)
- spinal fusion
- biopsy or resection of vertebral body
- disc replacement
- exposure of sympathetic chain (general surgery)

### Position

Place in semilateral position (45 degrees to horizontal)  
 use sandbags or bean bag to hold patient at angle  
 or place patient supine and tilt table

Place left side up  
 aorta is more resistant to injury than vena cava

### Incision

Make incision from  
 posterior half of 12th rib to  
 lateral border of rectus abdominis (midway between umbilicus and pubic symphysis)

### Approach

Approach to spine

- incise subcutaneous fat
- expose aponeurosis of external oblique muscle
- divide external oblique in line with fibers
- divide internal oblique in line with incision and perpendicular to muscle fibers
- divide transversus abdominis in line with skin incision
- bluntly dissect plane between retroperitoneal fat and psoas fascia
- retract peritoneal cavity medially
  - bring ureter with peritoneal cavity
- follow surface of psoas muscle to vertebral bodies
- tie off segmental lumbar arteries of aorta in the field of dissection

L4/5 disc space

- mobilize aorta to the contralateral side
- place needle in disc and take lateral xray to identify level

## L5/S1 disc space

work between the bifurcation of aorta

place needle in disc and take lateral xray to identify level

## Dangers

### Sympathetic chain

lateral aspect of vertebral body

### Genitofemoral nerve

anterior surface of psoas muscle attached to fascia

### Segmental arteries

segmental lumbar arteries and veins q

aorta

### Ureter

lies between psoas fascia and peritoneum

attached more firmly to peritoneum

stroke to produce peristalsis to confirm

### Superior hypogastric plexus

injury leads to retrograde ejaculation

From:

<https://neurosurgerywiki.com/wiki/> - Neurosurgery Wiki

Permanent link:

[https://neurosurgerywiki.com/wiki/doku.php?id=anterolateral\\_retroperitoneal\\_approach](https://neurosurgerywiki.com/wiki/doku.php?id=anterolateral_retroperitoneal_approach)

Last update: **2024/06/07 02:56**

