RETRO PSOAS

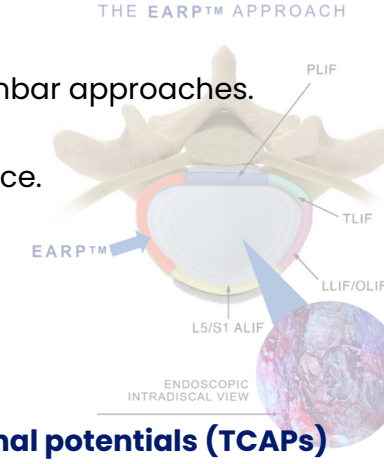
EARP™

Endoscopic Assisted Retropsoas Approach

A Smarter Path to Spinal Reconstruction

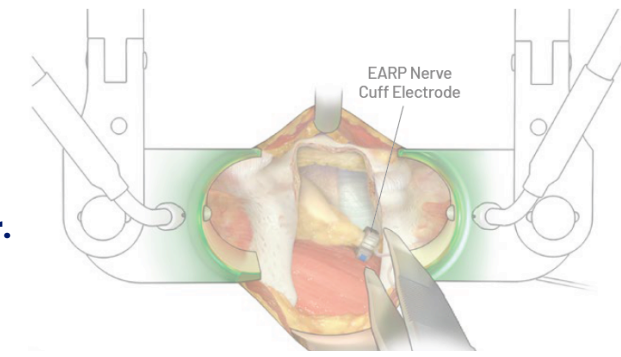
The EARP Approach and Goals of IONM

- The EARP approach is a single, **one-sided approach** that combines the strengths of exiting lumbar approaches.
- At each level, the retractor is placed **behind the psoas** muscle just lateral to the vertebrae
- The retractor **retracts laterally on the psoas muscle** to create the surgical corridor to disc space.
- The **exiting nerve root** (L2, L3, L4 or L5) at that level is retracted with the psoas muscle.
- The **goal of IONM** is to monitor the safety of that nerve root during the retraction.



Key Points about EARP IONM

- Uses a variation of Trans-abdominal MEPs (taMEPs), called **trans-foraminal compound actional potentials (TCAPs)**
- Instead of trans-abdominal stim, surgeon places stimulating needles to depth of foramina at T12-L1.
- Baseline **TCAPs from muscles** serve as initial control. *Muscle relaxation will then be used*
- Surgeon also places a **cuff electrode on the exiting nerve root** to record **TCAPs from the nerve.**
- **During active retraction, monitor nerve TCAPs every 30 seconds**

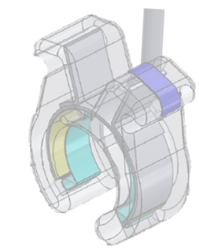


Setting up for Optimal IONM

1. **Confirm side** of approach with surgeon (left or right).
2. Placed recording needles in ipsilateral **psoas, quadriceps, and tibialis anterior.**
3. Place **ground** ipsilateral just **below lowest rib.**
4. Place **reference for cuff** recording below ground at ipsilateral **iliac crest.**

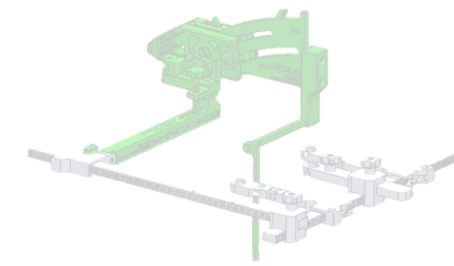
Key Monitoring Parameters

1. **TCAP stimulation is a single,** biphasic, 0.3 msec pulse (like triggered EMG).
2. Intensity needed ranges from 30 mA to 150 mA.
3. Prior to incision, establish robust **baseline TCAPs from all 3 ipsilateral muscles.**
4. **Muscle relaxation may then be administered.**
5. Cuff has 2 contacts. Have 2 cuff recording channels (**Cuff-Cuff & Cuff-iliac reference)**
6. **Establish baseline TCAP nerve responses prior to retractor deployment.**
7. **Good baseline TCAPs are critical.** Do not proceed without establishing.
8. if baseline TCAPs from nerve cannot be established, **refer to troubleshooting guide**



Monitoring Protocol During Retraction

1. **Acquire TCAPs every 30 seconds** during active retraction.
2. **A 50% change in amplitude** that repeats 3 times warrants an **alert.**
3. Refer to **intervention guide** immediately if there is an alert.



One Position. One Incision. Faster Recovery.

bwilent@retropsoas.com
724-877-7600
www.retropsoas.com