

FASCIA ILIACA BLOCK

Pre-Course Learning



Fascia Iliaca Block

PLAN

- **Why**
- **Cautions & Contraindication**
- **Anatomy and Ultrasound**
- **Kit**
- **Consent**
- **Monitoring**
- **Local Anaesthetic Toxicity**

Fascia Iliaca Block



WHY?

- **Analgesic Effect <30min**
- **Duration 12-22hr**
- **Better than NSAID + Opiate**
- **Reduced Opiate usage**
- **Less Nausea**
- **Less Pneumonia**
- **Earlier Mobilisation (Post-OP)**
- **Reduced Delirium**



Fascia Iliaca Block

FASCIA ILIACA VS. FEMORAL NERVE BLOCK

- **Effectiveness:** some evidence that FNB is more effective than FIB
- **Drug Dose:** FNB uses significantly less anaesthetic
- **Difficulty:** FNB Target area smaller than FIB
- **Complications:** FNB higher risk of vascular & neural damage



Fascia Iliaca Block

CAUTION & CONTRAINDICATION

Cautions

- Anticoagulation (Warfarin OR NOAC)
- Requires other blocks (e.g. Haematoma)
- Proceeding Opiates

Contraindications

- Patient Refusal
- Allergy/Anaphylaxis
- Inflammation/Infection at site
- Previous By-Pass surgery OR near graft site



Fascia Iliaca Block

ANATOMY - INNERVATION

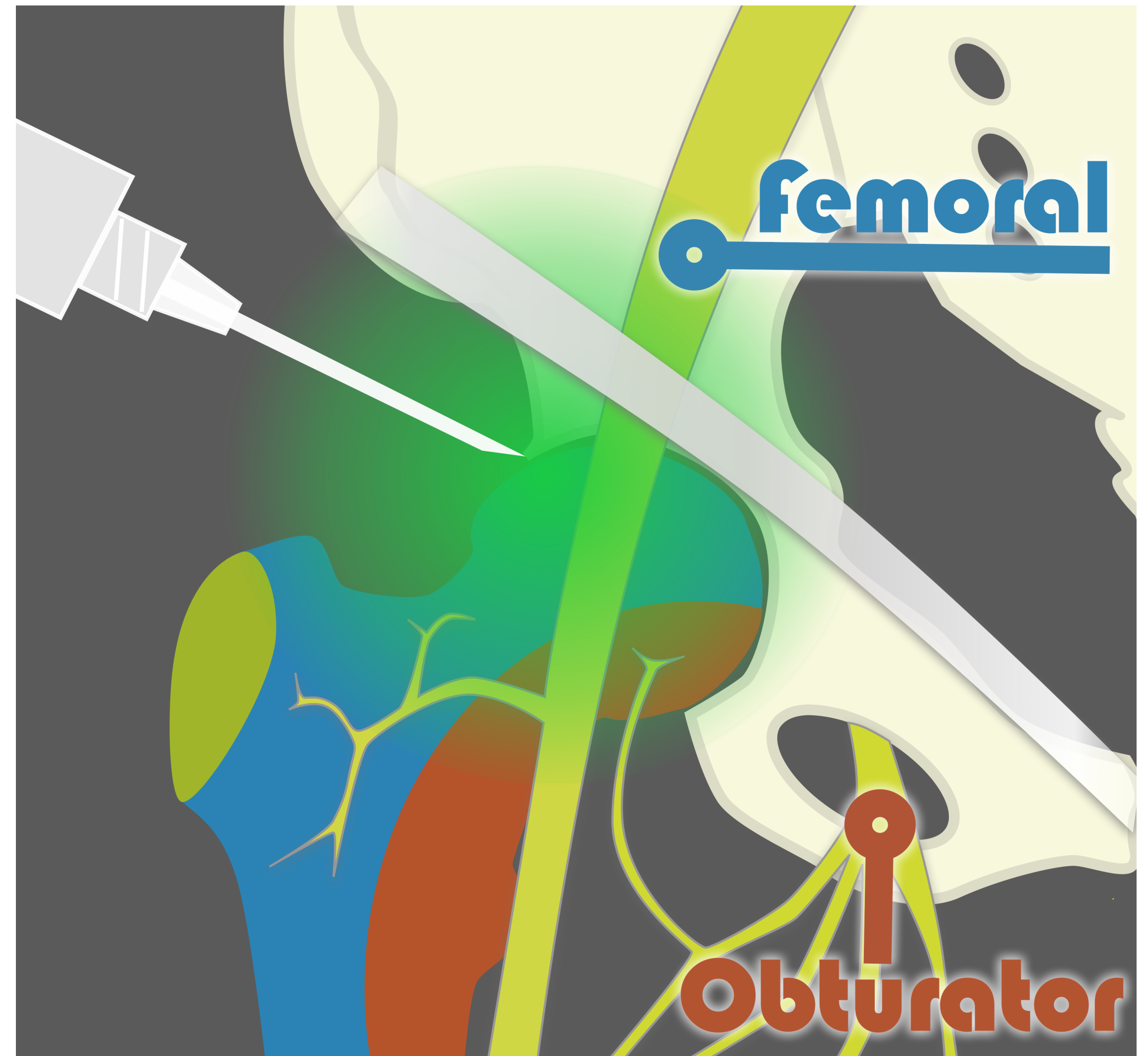


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ANATOMY - INNERVATION

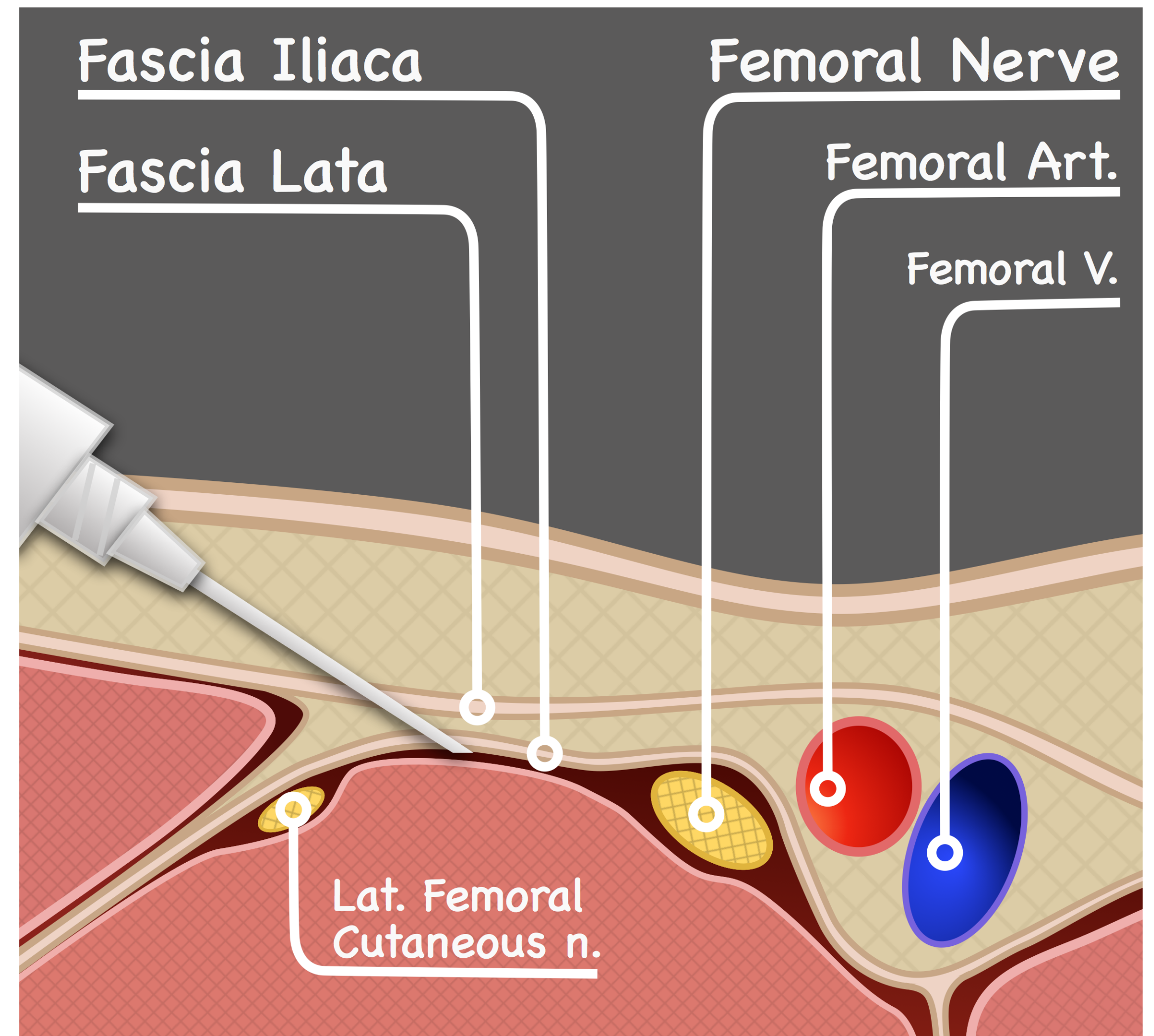
- **Fascia Iliaca Block** is a large volume compartment
- **Femoral nerve** is the largest and most constantly blocked nerve.
- **Obturator nerve** is variably blocked
- **Sciatic nerve** runs in the posterior compartment so is NOT blocked

Fascia Iliaca Block



ANATOMY - CROSS SECTION

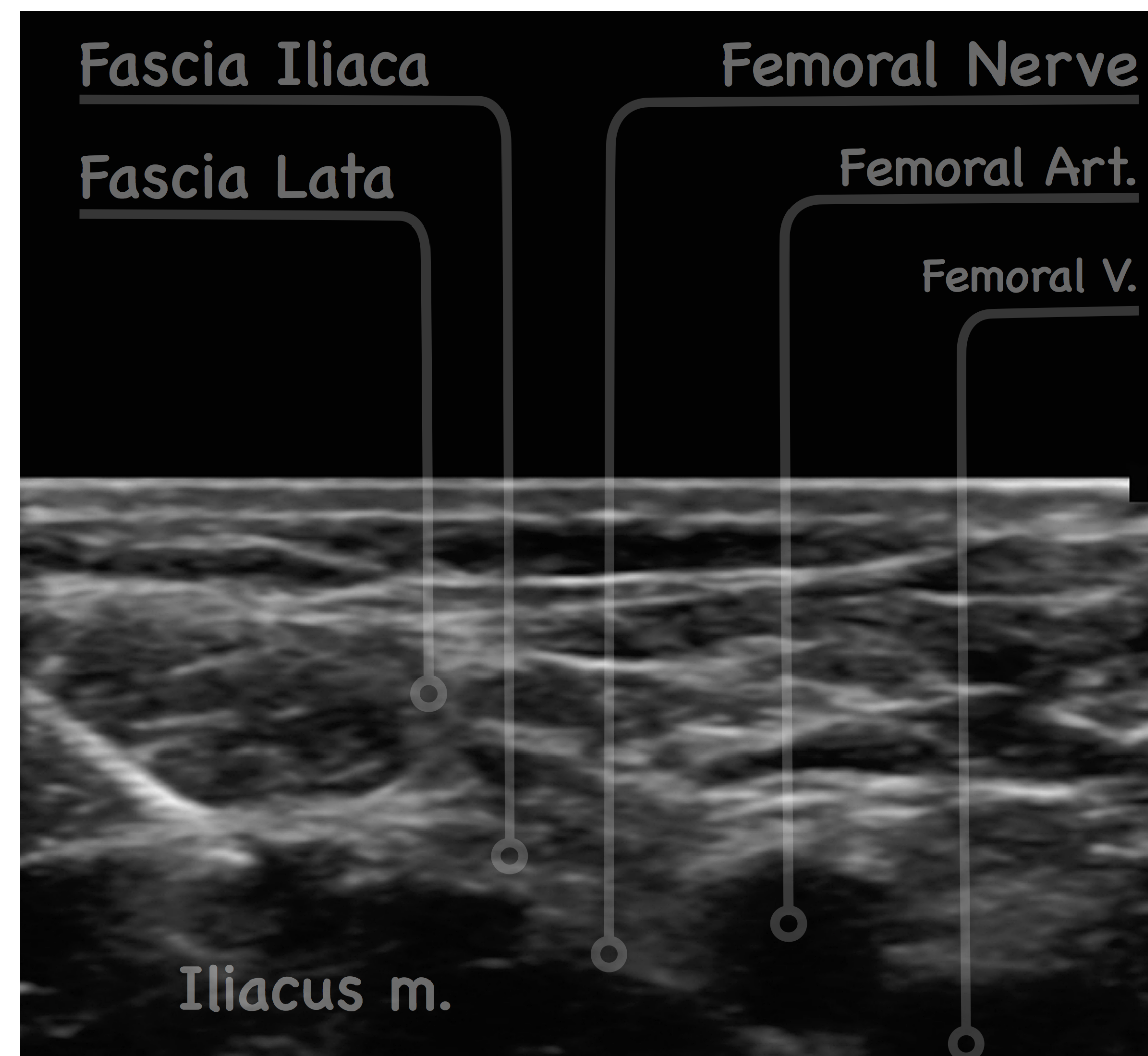
- **Femoral nerve, lays just lateral to the Femoral artery.**
- **They are separated by the Fascia Iliaca**
- **The needle will pass through**
 - Fascia Lata [AKA - Pop 1]
 - Fascia Iliacus [AKA - Pop 2]



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ANATOMY - CROSS SECTION

- **Probe is held laterally below the inguinal ligament**
- **Femoral Artery is probably the easiest structure to find**
- **Femoral nerve, is often difficult to see**
- **Fascias appear as bright lines**
 - Fascia Lata [AKA - Pop 1]
 - Fascia Iliaca [AKA - Pop 2]



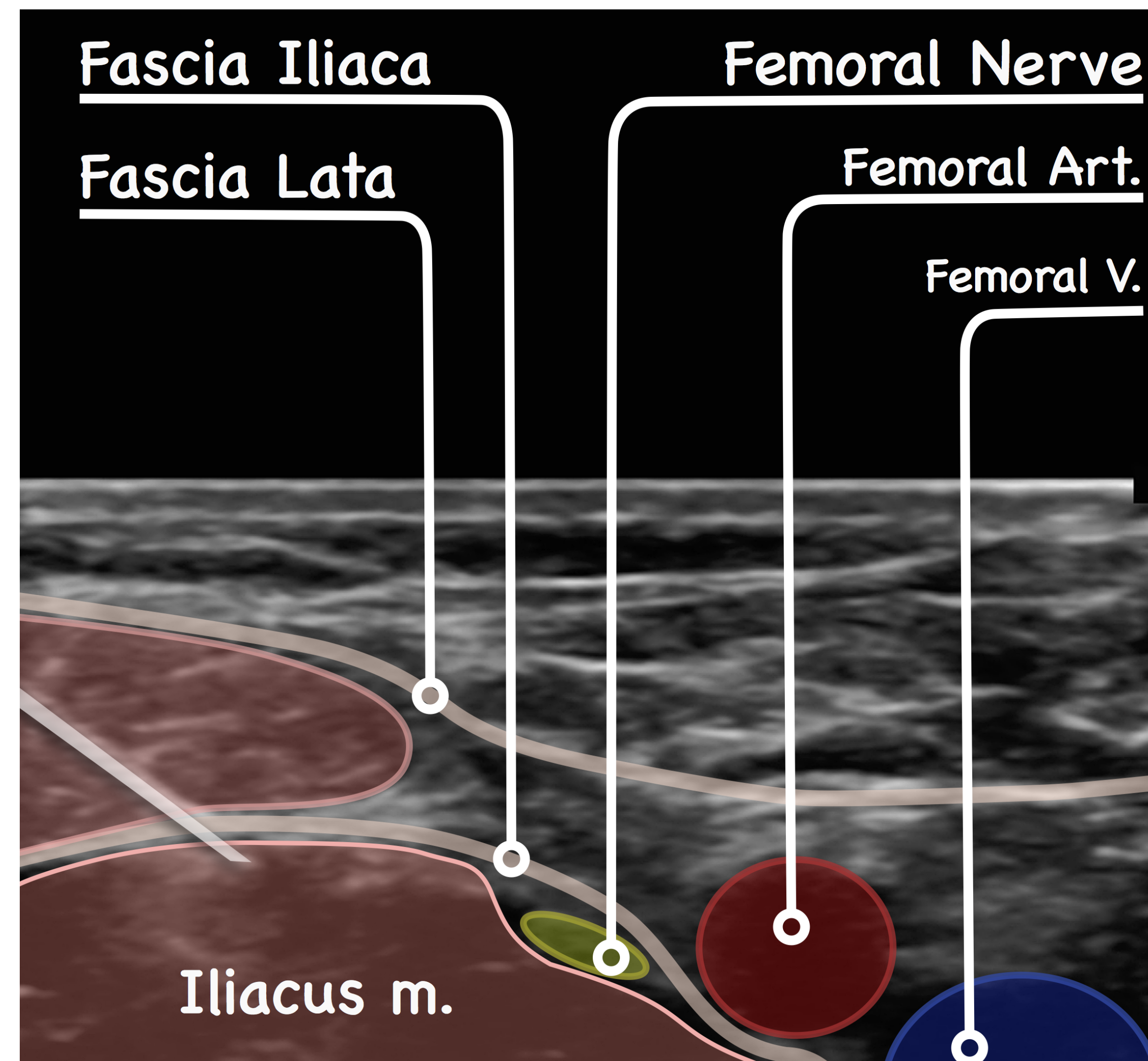
Fascia Iliaca Block



ANATOMY - CROSS SECTION

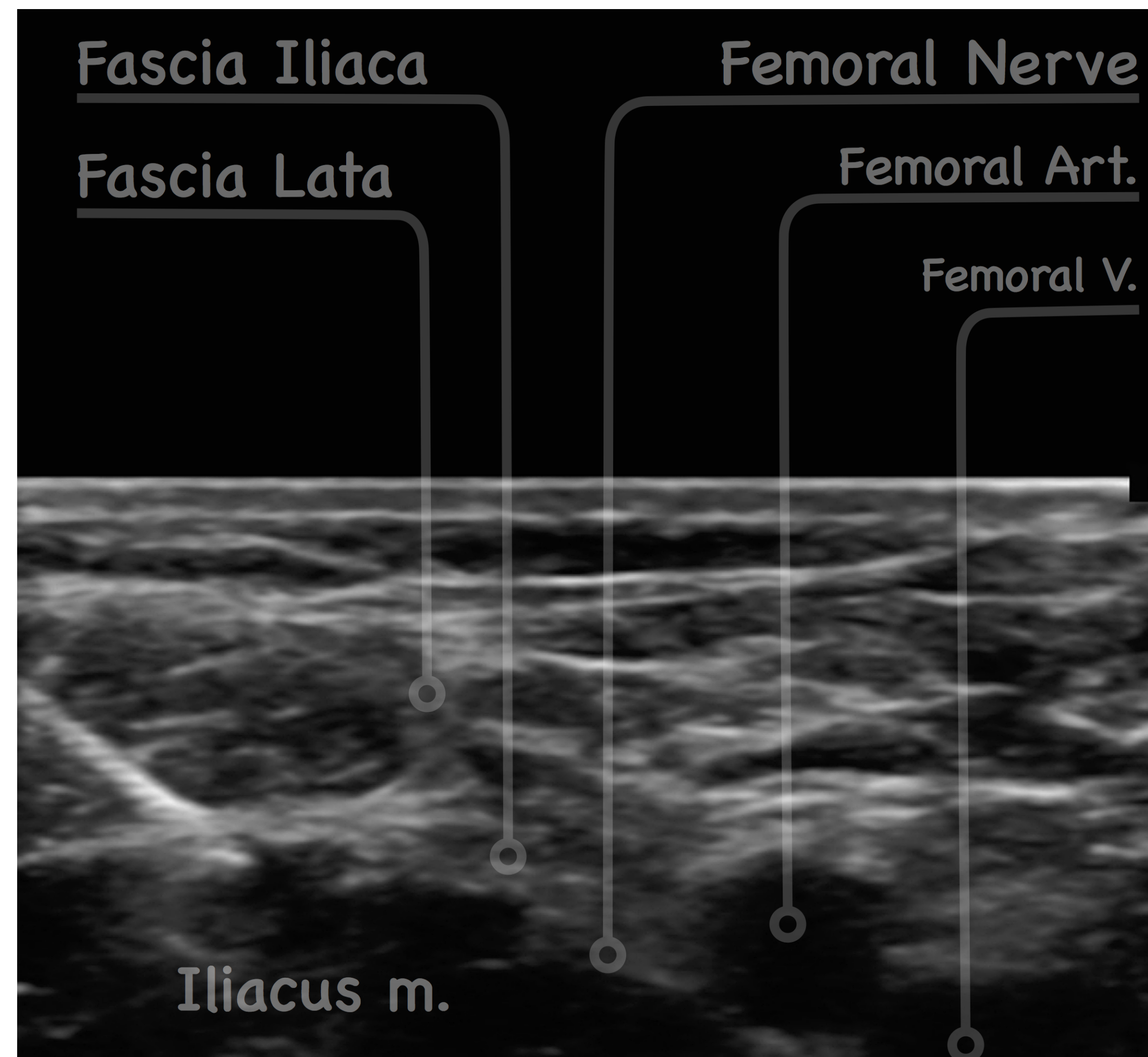
- **Find the Femoral Artery**
- **Fascias**
 - Fascia Lata - above the artery
 - Fascia Iliaca - lat. and under the artery
- **Femoral Nerve** - lat. to the artery , on top of the Iliacus Muscle and under Fascia Iliaca.
- **Needle** - Just under Fascia Iliaca, lat. to the Femoral Nerve.

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ANATOMY - CROSS SECTION

- **Round Pulsey Artery**
- **Femoral nerve, gray oval**
- **Surfaces/Layers parallel to the surface show up best**
- **The needle has passed through**
 - Fascia Lata [AKA - Pop 1]
 - Fascia Iliaca [AKA - Pop 2]



Fascia Iliaca Block



KIT

1. Chlorhexadine 0.5%

2. Tegaderm

3. Aqua Gel

4. Nerve Block Needle

5. Drawing up needle

6. 20ml Syringe x2

7. Anaesthetic

Fascia Iliaca Block



ANAESTHETIC DOSE

- **Drug:** Levobupivacaine 0.25% (2.5mg/ml)
- **MAX Dose:** 2.5 mg/kg
- **MAX Volume:** 1ml/kg
- **Recommended Volumes (Adults):**
 - **30-50kg** - 30ml
 - **>50kg** - 40ml



Fascia Iliaca Block

CONSENT

Pros

- Analgesic Effect <30min
- Duration 12-22hr
- More effective than NSAID + Opiate
- Reduced Opiate usage
- Less Nausea
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- Earlier Mobilisation (Post-OP)
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Cons

- Intravascular Injection
- Local Anaesthetic Toxicity
- Nerve Damage (Temp/Perm)
- Infection
- Block Failure
- Allergy
- Injury due to leg weakness/numbness



Fascia Iliaca Block

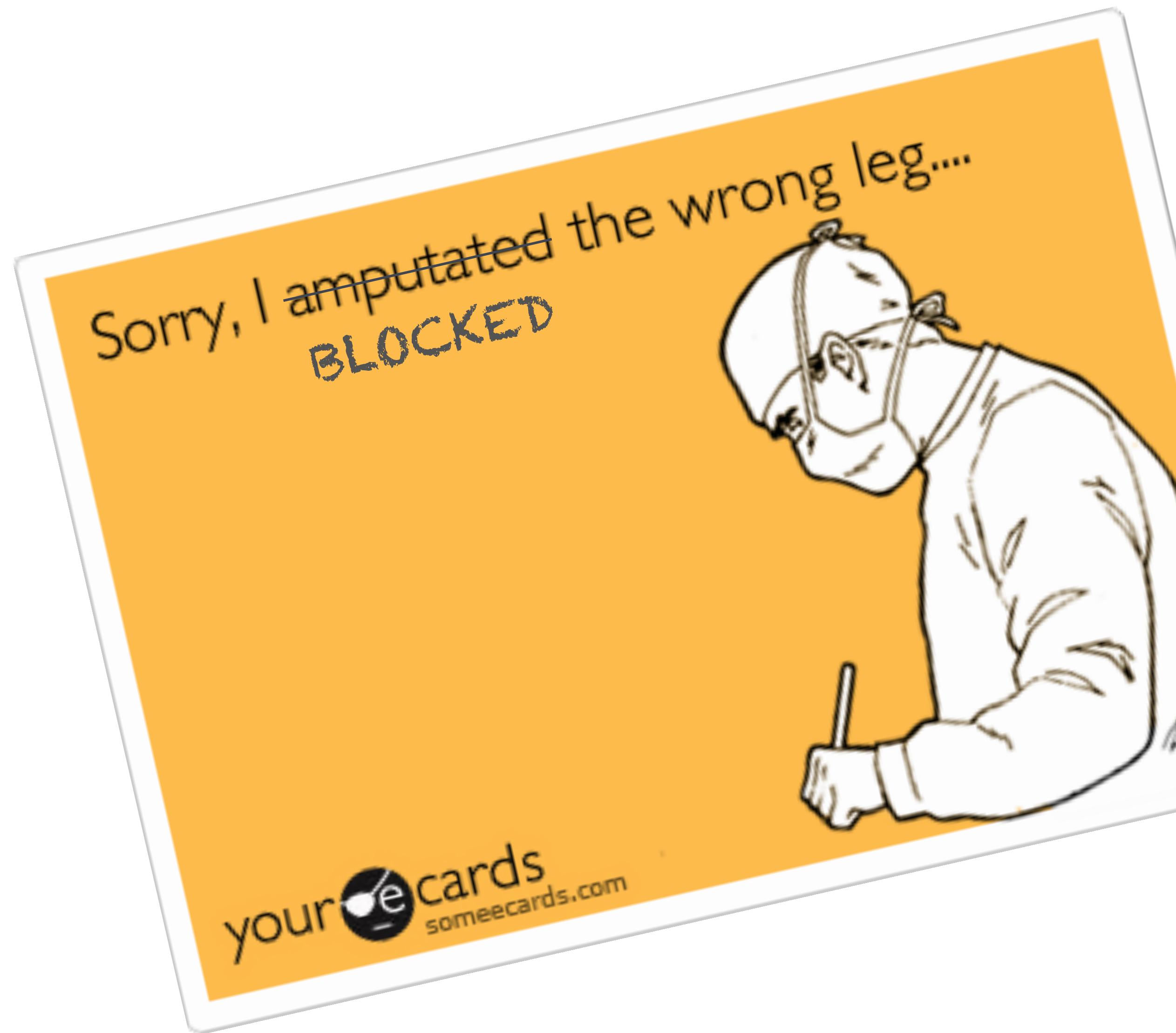
STOP before you BLOCK

Immediately before inserting needle

Check Site with:

1. Patient (if possible)
2. X-Ray
3. Site marking

Fascia Iliaca Block



POST-PROCEDURE MONITORING

Peak Absorption/Effect: 15-30min

1. Observable Cubical

2. Cardiac Monitor

3. Obs: 5, 10, 15, 30 min



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LOCAL ANAESTHETIC TOXICITY

I. Recognise

- Sudden alteration in mental state, severe agitation, LOC, seizure
- CVS collapse, sinus bradycardia, conduction block, systole, VT

2. Initial Management

- A. Maintain Airway
- B. 100% Oxygen
- C. IV access + 0.9% Saline
- D. Seizures : Benzodiazepine

3. Lipid Treatment - if above not working

1. Bolus: 1.5ml/kg 20% lipid emulsion (intralipid)
2. Infusion: 15ml/kg/hr 20% lipid emulsion (intralipid)

4. Report

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AAGBI Safety Guideline

Management of Severe Local Anaesthetic Toxicity



1 Recognition	Signs of severe toxicity: <ul style="list-style-type: none">• Sudden alteration in mental status, severe agitation or loss of consciousness, with or without tonic-clonic convulsions• Cardiovascular collapse: sinus bradycardia, conduction blocks, asystole and ventricular tachyarrhythmias may all occur• Local anaesthetic (LA) toxicity may occur some time after an initial injection				
2 Immediate management	<ul style="list-style-type: none">• Stop injecting the LA• Call for help• Maintain the airway and, if necessary, secure it with a tracheal tube• Give 100% oxygen and ensure adequate lung ventilation (hyperventilation may help by increasing plasma pH in the presence of metabolic acidosis)• Confirm or establish intravenous access• Control seizures: give a benzodiazepine, thiopental or propofol in small incremental doses• Assess cardiovascular status throughout• Consider drawing blood for analysis, but do not delay definitive treatment to do this				
3 Treatment	<table border="1"><tr><td>IN CIRCULATORY ARREST<ul style="list-style-type: none">• Start cardiopulmonary resuscitation (CPR) using standard protocols• Manage arrhythmias using the same protocols, recognising that arrhythmias may be very refractory to treatment• Consider the use of cardiopulmonary bypass if available</td><td>WITHOUT CIRCULATORY ARREST (Use conventional therapies to treat:<ul style="list-style-type: none">• Hypotension,• Bradycardia,• Tachyarrhythmias)</td></tr><tr><td>GIVE INTRAVENOUS LIPID EMULSION (Following the regimen overleaf)<ul style="list-style-type: none">• Continue CPR throughout treatment with lipid emulsion• Recovery from LA-induced cardiac arrest may take >1 h• Propofol is not a suitable substitute for lipid emulsion• Lidocaine should not be used as an anti-arrhythmic therapy</td><td>CONSIDER INTRAVENOUS LIPID EMULSION (Following the regimen overleaf)<ul style="list-style-type: none">• Propofol is not a suitable substitute for lipid emulsion• Lidocaine should not be used as an anti-arrhythmic therapy</td></tr></table>	IN CIRCULATORY ARREST <ul style="list-style-type: none">• Start cardiopulmonary resuscitation (CPR) using standard protocols• Manage arrhythmias using the same protocols, recognising that arrhythmias may be very refractory to treatment• Consider the use of cardiopulmonary bypass if available	WITHOUT CIRCULATORY ARREST (Use conventional therapies to treat: <ul style="list-style-type: none">• Hypotension,• Bradycardia,• Tachyarrhythmias)	GIVE INTRAVENOUS LIPID EMULSION (Following the regimen overleaf) <ul style="list-style-type: none">• Continue CPR throughout treatment with lipid emulsion• Recovery from LA-induced cardiac arrest may take >1 h• Propofol is not a suitable substitute for lipid emulsion• Lidocaine should not be used as an anti-arrhythmic therapy	CONSIDER INTRAVENOUS LIPID EMULSION (Following the regimen overleaf) <ul style="list-style-type: none">• Propofol is not a suitable substitute for lipid emulsion• Lidocaine should not be used as an anti-arrhythmic therapy
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4 Follow-up	<ul style="list-style-type: none">• Arrange safe transfer to a clinical area with appropriate equipment and suitable staff until sustained recovery is achieved• Exclude pancreatitis by regular clinical review, including daily amylase or lipase assays for two days• Report cases as follows:<ul style="list-style-type: none">in the United Kingdom to the National Patient Safety Agency (via www.npsa.nhs.uk)in the Republic of Ireland to the Irish Medicines Board (via www.imb.ie)• If lipid has been given, please also report its use to the international registry at www.lipidregistry.org. Details may also be posted at www.lipidteam.org				

Your nearest bag of Lipid Emulsion is kept _____

This guideline is not a standard medical practice. The ultimate judgement with regard to a particular clinical procedure or treatment plan must be made by the clinician in the light of the clinical data presented and their own judgement and treatment experience.
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SUMMARY

- **Is the patient suitable for Fascia Iliaca Block?**
- **Consent**
- **Set-up**
- **STOP Before You BLOCK!!!**
- **Monitor**
- **Local Anaesthetic Toxicity**

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