Block Darts
Credit to Bradly Palocko and Highland Ultrasound

- Equipment:
  - Proctor with block knowledge
  - US Machine, gel, towels
  - Human-shaped Target with sectioned off parts of body: Arms, Legs, Torso, Head/Neck
    - Set-up at distance where there is some challenge to hit different parts of body but not impossible
  - Projectile launcher (e.g. darts)

- Rules: Use whole time to get as many points as possible
  - Launch projectile until strike area of body
    - Team then names a block in that area. If team is stuck proctor may give hint.
    - If there are no blocks remaining in area hit, team needs to launch projectile again until they hit an area that has remaining blocks
  - Team tries to scan nerve. Points out target on. Get points, Triggers question
  - Question answered
  - Team roles rotate and start again

- Scoring
  - 14 total blocks: 10 points per correctly identified blocks
  - 15 total questions: 10 points per correct question

Upper:
- Superficial Cervical Plexus
- Interscalene Brachial Plexus
- Supraclavicular Brachial Plexus
- Facial Nerve Blocks

Arm:
- Radial
- Ulnar
- Median

Leg:
- Fascia Iliaca
- PENG
- Saphenous Nerve Block
- Popliteal/Sciatica
- Posterior Tibial
- Penile Block

Truncal:
- Serratus
- TAP
- ESPB
Upper extremity and Head & Neck -

1. **Superficial Cervical Plexus**

   Location:

   ![Image of Superficial Cervical Plexus Block]

   Second order questions:
   - Name the two muscle bellies that run along the SCP: *Sternocleidomastoid and Levator scapulae muscle* *(scalene muscles also acceptable answer)*

2. **Interscalene Brachial Plexus**

   Location:

   ![Image of Interscalene Brachial Plexus Block]

   Second Order Question:
   - Which nerve roots are you blocking when performing a interscalene block? *C5-C8 is the goal*
   - (Bonus Points) What structure mimics the brachial plexus? How do you avoid confusing them? *Transverse cervical artery; use doppler*
3. **Supraclavicular Brachial Plexus**

Location:

![Supraclavicular Brachial Plexus Block](image)

*Parallel to the Clavicle*

Locate the subclavian artery (SCA) and look lateral for the brachial plexus.

**Second Order Question:**

- Oh no, you injected into the SCA! What is the dosing of intralipid therapy for lidocaine/bupivacaine toxicity? *Initial bolus of 20% lipid emulsion 1.5mL/kg or a 100 mL bolus followed by 0.25mL/kg/min for 30-60 minutes or until hemodynamically stable.*

4. **Median/Ulnar/Radial**

Locations:

Median

![Median/Ulnar/Radial Locations](image)
Second order question:

- What are three nerves that have sensory coverage for the forearm region?
- Radial, Median antebrachial and Lateral antebrachial (aka musculocutaneous)
5. **Facial Nerve Blocks**

Locations:

1. Infraorbital
2. Mental
3. Supraorbital, supratrochlear, and infratrochlear
4. Dorsal nasal nerve
5. Zygomaticotemporal
6. Zygomaticofacial
Second Order Questions:

- Name the block best utilized for this: *Greater auricular nerve block*

**Lower Extremity** -

1. *Fascia Iliaca*

   Location:

   - Oh no, EPIC is down. What is the dose needed for large plane nerve blocks?
     
     0.25% PF Bupivacaine 40mL = 100 mg
2. **PENG (Pericapsular Nerve Group)**

Location:

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Second order question: What is the benefit of PENG over FIB? *In addition to providing coverage along the femoral nerve, the PENG also includes branches of the sciatica and obturator nerves allowing for more proximal coverage.*

3. **Saphenous Nerve Block**

Location: (Mid-thigh)

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Second order:

The Saphenous provides ____ *(medial or lateral)* anesthesia as opposed to the popliteal block which provides ____ *(medial or lateral)* anesthesia to the lower leg.

*Updated April 2023*
4. **Popliteal Sciatica Block**

Location:

Second Order Question:

A patient cut the bottom of their foot on a piece of glass. You decide to perform a pop-block. Why does this work? *The plantar aspect of the foot is innervated by the medial calcaneal branches, medial plantar nerve, and lateral plantar nerve which are all branches from the tibial nerve.*

5. **Posterior tibial nerve**

Location

Second order question:

You ask Bob to perform this block for a bimalleolar fracture. Bob looks disappointed. Why is Bob disappointed in you? *While the PT block is good for a calcaneal fracture the ankle itself has multiple innervations and would be better blocked w/ a pop and/plus saphenous block.*

*Updated April 2023*
6. Penile Block

Location: pretty straight forward...

Second order:

Innervation of the penis is derived from which nerve primarily? *Pudendal nerve which branch to form the dorsal penile nerves*
Truncal Blocks -

1. **Serratus**

   Location:

   Second order question:
   
   Is there a benefit to injecting below the serratus vs above? *No. The clinic effect is the same because there is continuity of the space.*

2. **TAP**

   Location:

   Second Order: Name a few indications for a TAP block: *abdominal wall abscess, appendicitis, r sided diverticulitis, epiploic appendagitis, hernia, abdominal wall pain*
3. **Erector Spinae Plane Block (ESPB)**

Location:

Second order question:

What is the expected vertebral coverage for an ESPB? *Typically ~3 vertebral levels above and 4 levels below*