



OSCE EXAMPLE SCENARIOS

This document provides one example scenario for each skill described in the APPLIED Examination - Objective Structured Clinical Examination (OSCE) [Content Outline](#).

Each example consists of the materials that will be given to the candidate prior to entering the exam room for that skill. For each of the Communication and Professionalism skills (A.1. – A.6.), a specific scenario is presented. For each of the Technical Skills (B.1. – B.3.), the general instructions for each scenario are presented.

OSCE CONTENT OUTLINE: A.1.

INFORMED CONSENT

Addison Osce is a 68-year-old patient who is scheduled for an arthroscopic left-sided rotator cuff repair. The patient reports stiffness and pain in the shoulder for 6 months. The patient was evaluated last week in the preoperative evaluation clinic and your colleague has approved the patient for anesthesia.

Past medical history is significant for hypertension and mild COPD. No labs were drawn preoperatively. ECG is normal. There is no evidence of heart disease. The patient reports mild shortness of breath with vigorous exertion. Review of symptoms is otherwise negative.

Medications include lisinopril (last dose yesterday), PRN albuterol and PRN Vicodin® (hydrocodone and acetaminophen).

Prior surgical history includes an open reduction of a right distal radius fracture 20 years ago.

Physical exam is unremarkable, with a reassuring airway examination.

Vital signs: HR 85; BP 148/84.

No allergies.

The patient is appropriately NPO.

The patient has already agreed to proceed with general anesthesia after speaking with your colleague who will be providing general anesthesia in the operating room. Your anesthesia group also routinely offers a nerve block as part of the anesthetic plan for rotator cuff surgery. The block is performed pre- or postoperatively by a separate regional anesthesiology team that you are leading today. You agree that regional analgesia is appropriate in this patient. A separate informed consent for general anesthesia has already been obtained by your colleague.

Task Statement:

Your task is to obtain informed consent for the nerve block. Your institution does not employ written informed consent (verbal consent is sufficient). You should **NOT** repeat your colleague's history and physical examination.

OSCE CONTENT OUTLINE: A.2.

TREATMENT OPTIONS

Mercury Osce is a 35-year-old patient who lacerated the lateral aspect of the right lower leg with a lawnmower 3 hours ago. The patient requires an urgent surgical repair of tendon lacerations.

Past medical history is significant for tonsillectomy and adenoidectomy at age 16. The patient developed vocal cord polyps afterwards. At the time, the patient was told that these were related to the breathing tube used during surgery. The polyps made the patient's voice hoarse and restricted breathing during exertion. The polyps were surgically removed at age 17 and have not returned. The patient does not smoke or drink and has no other medical concerns.

No medications.

The patient is a professional distance runner. The patient's mother developed arachnoiditis after an epidural anesthetic for delivery of a sibling and has had lower extremity weakness since that time.

Physical exam shows normal airway and cardiopulmonary exams. The left lower leg is wrapped in an ACE bandage.

Vital signs: BP 115/65; HR 66; SpO₂ 99%; pain score 3 out of 10.

No allergies.

The patient ate a full lunch 4 hours ago (1 hour before the injury).

You are the attending anesthesiologist seeing the patient in the preoperative holding area. A resident working with you has already completed the preoperative evaluation. However, the patient has concerns about both general and regional anesthesia related to personal experiences and those of the patient's mother and asks to speak to you about options.

Task Statement:

Your task is to discuss with the patient the anesthetic options given the patient's specific concerns and agree upon an anesthetic plan. You should **NOT** repeat the history and physical examination and do **NOT** need to obtain formal informed consent, which will be obtained by the anesthesia resident after your discussion.

OSCE CONTENT OUTLINE: A.3.

PERI-PROCEDURAL COMPLICATIONS

You provided general anesthesia for Peyton Osce, an otherwise healthy patient who received a laparoscopic inguinal herniorrhaphy. The anesthetic was relatively uneventful with the exception that towards the end of the case the surgeon commented that the patient was inadequately relaxed.

Both arms were tucked at the patient's side, and you monitored neuromuscular function using train-of-four stimulation of the facial nerve. At the time of the surgeon's comment, all four twitches of the train-of-four were equal, and you administered 20 mg of rocuronium.

Immediately after the injection, the heart rate increased from 80 to 128. You examined the syringe that was injected, and realized that instead of injecting 2 ml of rocuronium, in the darkened operation room you picked up the wrong syringe and actually injected 2 ml (0.4 mg) of the glycopyrrolate that was drawn up for neuromuscular blockade reversal.

You informed the surgeon that the sudden tachycardia was a result of this medication error. You elected not to administer additional rocuronium. The heart rate slowly returned to baseline, and the rest of the anesthetic was uneventful, as was the PACU course.

The patient is now ready for discharge and is alert and comfortable. The surgeon has informed the patient that there was a medication error, and that you will be discussing this error with the patient.

Task Statement:

Your task is to discuss this medication error with the patient.

OSCE CONTENT OUTLINE: A.4.

ETHICAL ISSUES

You are working in the operating room on call and have just started your Sunday evening call shift. You have been assigned to take care of Chris Osce, a patient with suspected acute appendicitis who requires an urgent appendectomy. The patient has multiple serious co-morbidities, including metastatic melanoma, coronary artery disease, and poorly-controlled hypertension.

In the past, the patient has expressed wishes to not be resuscitated and a Do-Not-Resuscitate (DNR) status has been in place for one month.

The patient was evaluated by one of your colleagues during the previous shift, who discussed the usual conduct of general anesthesia but did not address the DNR status. An internist has also evaluated the patient and concluded that no further pre-anesthetic testing is necessary; you concur.

Current vital signs are HR 101; BP 165/95; RR 22; SaO₂ 98% on room air; pain score of 3 out of 10.

The operating room is almost ready for the patient to come back and you will be providing anesthesia. You have determined that endotracheal intubation is required as a part of the anesthetic plan. The patient has asked specifically to discuss DNR status with you as the anesthesiologist who will care for the patient.

Task Statement:

Your task is to discuss how to manage the patient's DNR status in the perioperative period. You do **NOT** need to obtain formal informed consent for general anesthesia or discuss other aspects of anesthetic care not related to DNR status.

OSCE CONTENT OUTLINE: A.5.

COMMUNICATION WITH OTHER PROFESSIONALS

You are scheduled to provide anesthesia for a 62-year-old patient for an elective facelift under general anesthesia.

When you evaluate the patient in the preoperative area, you find that the pulse is irregular and rapid. You obtain an ECG which shows atrial fibrillation. After interviewing the patient and reviewing the medical record, you are confident that this is new-onset atrial fibrillation.

The patient denies any cardiac symptoms other than intermittent palpitations that have occurred over about the last month. During the palpitations, the patient needs to sit down and rest until they pass. The patient denies any other cardiac history other than long-standing hypertension treated with hydrochlorothiazide.

No other testing or laboratory work is available.

Vital signs: BP 105/67; HR 130 and irregular; RR 16; oxygen saturation 97% (room air).

In your clinical judgment, this elective procedure **MUST** be postponed so that the patient can be evaluated by a cardiologist and optimized for surgery, if necessary. You will meet with Dr. Jordan Osce, the surgeon who scheduled the case, prior to the start of the case to discuss your concerns.

Task Statement:

Your task is to present your recommendation to postpone the surgery to Dr. Osce and determine the best course of action. The discussion is taking place in a consultation room shortly prior to the scheduled start of the case. You will **NOT** have any direct interactions with the patient as part of this scenario.

OSCE CONTENT OUTLINE: A.6.

PRACTICE-BASED LEARNING AND IMPROVEMENT

The hospital administrators are concerned about a lower than desired proportion of first case on-time starts in the main operating rooms. Your partner, Dr. Taylor Osce, has been tasked by the department chair to design and implement a quality improvement (QI) project to improve the proportion of cases starting on time.

Dr. Osce has never conducted a QI project and is in need of some direction. You have only a few minutes between cases available to talk, but Dr. Osce wants to get a general idea from you about the steps needed to perform a QI project.

Task Statement:

Your task is to explain to your colleague the general steps of how to design and implement a quality improvement project. The discussion should **NOT** focus on the specifics of on-time OR starts, but rather on your general approach to any QI project.

OSCE CONTENT OUTLINE: B.1.

INTERPRETATION OF MONITORS

In this station, you will be asked to interpret data from a physiologic display. You will be presented with three separate scenarios.

Each scenario will begin with a short case description. A recording of a simulated physiologic monitor will then be shown.

In each scenario, changes will occur in the monitor recording. These changes may occur while the recording is playing, or you will be shown two separate recordings, one before and one after the changes have occurred. You will be told which format will be used as a part of the case description for each scenario.

After you watch the monitor recording, you will have approximately 60 seconds to answer the following two questions about the scenario:

- A. What is the most likely diagnosis that resulted in the changes observed?
- B. What features on the monitor support the diagnosis?

Please be specific and concise when providing your responses. A timer at the right bottom corner of the screen will count backwards for approximately 60 seconds to apprise you of the remaining time for the answering portion of each scenario.

Each recording will be played only once; you will NOT have the opportunity to go back and review the recordings.

Each scenario is separate and has no connection with the preceding or subsequent scenario.

[Click here to see a sample scenario](#) and [click here and to see the answer key for this scenario](#).

Physiologic monitor simulation software has been used to create the monitor recordings.

[Click here to see an example of the physiologic display and definitions of display labels](#).

OSCE CONTENT OUTLINE: B.2.

INTERPRETATION OF ECHOCARDIOGRAMS

In this station, you will be presented with 3 separate case scenarios.

Each scenario will begin with instructions and a short case description, if relevant. After you watch the echocardiogram recordings, you will be asked questions about the scenario by an examiner. The scenarios will include 1 image identification, 1 short case, and 1 long case as described below.

During this session, you will be scored on the numbered items listed below. The examiner may also ask you to describe the features of the recording that you used to make your decisions for the short and long cases.

Image Identification (approximately 45 seconds):

For the image identification, you will view a single echocardiogram loop with labeled structures. [Click here to see a sample video.](#)

After watching the video, you will be asked to:

1. Select the proper name of the view from a list of standard views ([Click here to see the list](#)).
2. Identify each of the labeled structures.

Short Case (approximately 2 minutes):

For the short case, you will view 1 or more echocardiogram loops. If more than 1 loop is presented, assume it is obtained from the same patient. [Click here to see a sample video.](#)

After watching the video, you will be asked to:

1. Select the proper name of the view(s) from a list of standard views ([Click here to see the list](#)).
2. Provide the most likely diagnosis based on the echocardiographic findings.

Long Case (approximately 2.5 minutes):

For the long case, you will view multiple echocardiogram loops from the same patient. [Click here to see a sample video.](#)

After watching the video, you will be asked to:

1. Select the proper name of the view(s) from a list of standard views ([Click here to see the list](#)).
2. Provide the most likely diagnosis based on the echocardiographic findings.
3. Explain to the examiner how you would manage this patient and why.

Each recording will be played only once; you will **NOT** have the opportunity to go back and review the recordings.

When you finish answering the questions associated with one case scenario, you may request to view the next recording at any time, but you will **NOT** be able to go back to other scenarios later.

Each of the 3 case scenarios is separate and has no connection with the preceding or subsequent scenario. You will provide all answers verbally to an examiner who will be in the room. The examiner will **NOT** provide additional information about the cases or the images.

[Click here](#) to view the full sample video, and [click here](#) to see the answer key for this scenario.

OSCE CONTENT OUTLINE: B.2.

INTERPRETATION OF ECHOCARDIOGRAMS

List of Echocardiogram Station Options for View Names

- a. Midesophageal Four Chamber
- b. Midesophageal Two Chamber
- c. Midesophageal Long Axis
- d. Midesophageal Ascending Aortic Long Axis
- e. Midesophageal Ascending Aortic Short Axis
- f. Midesophageal Aortic Valve Short Axis
- g. Midesophageal Right Ventricular Inflow-Outflow
- h. Midesophageal Bicaval
- i. Transgastric Midpapillary Short Axis
- j. Descending Aortic Short Axis
- k. Descending Aortic Long Axis

Additional Resources:

Click on the following links to access additional resources related to the interpretation of echocardiograms.

- [Key TEE Views](#)
- [Pathologies](#)
- [University of Toronto Virtual Transesophageal Echocardiography](#)
- [Open Anesthesia Basic Course in TEE](#)

OSCE CONTENT OUTLINE: B.3.

APPLICATION OF ULTRASONOGRAPHY

In this station, you will be asked to complete 2 separate tasks related to the use of ultrasound for vascular access or nerve blocks.

For each task, you will be required to produce an image using an ultrasound probe that you will manipulate. The examiner will operate the ultrasound machine, and you may request that the examiner adjust the depth or the gain.

You can instruct the standardized patient to position himself or herself as appropriate. The patient should remain supine for all vascular access tasks.

For each task, you will generate an image that would support the conduct of a specified vascular access or nerve block procedure. You may be asked to generate an in-plane or out-of-plane view. Once you are satisfied with the image, you will ask the examiner to freeze the image. You will then be asked to identify structure(s) in the image, as directed by the examiner.

You may be asked to identify the optimal needle positioning for vascular access or nerve block, as well as the optimal needle tip location to deposit local anesthetic.

You have no more than 3 minutes and 30 seconds to complete each task.

Your 2 tasks are to produce images to facilitate the following procedures, including identification of the appropriate structures. *(NOTE: For the actual examination, the specific procedures and structures will be listed, so that you will know which procedures will be examined before entering the examination room. The specific procedures that could be examined are included in the content outline.)*

Procedure 1 (e.g., vascular access):

- Identify laterality
- Identify structure 1
- Identify structure 2
- Demonstrate optimal needle positioning for vascular access

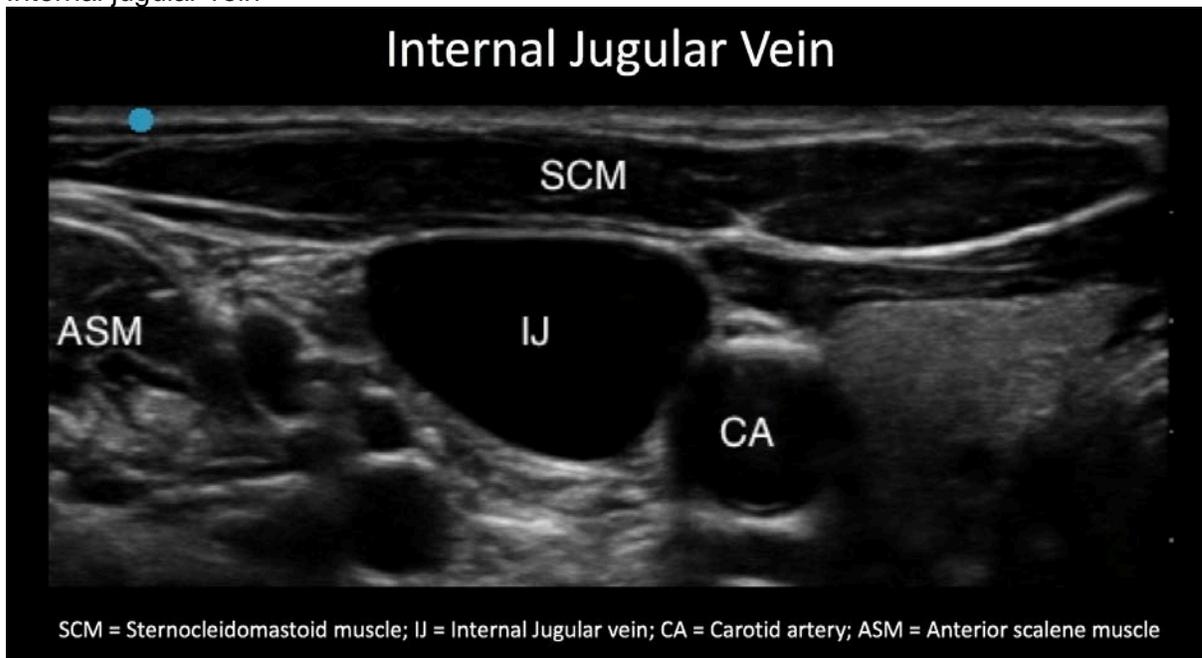
Procedure 2 (e.g., nerve block):

- Identify laterality
- Identify structure 1
- Identify structure 2
- Demonstrate optimal needle tip location to deposit local anesthetic

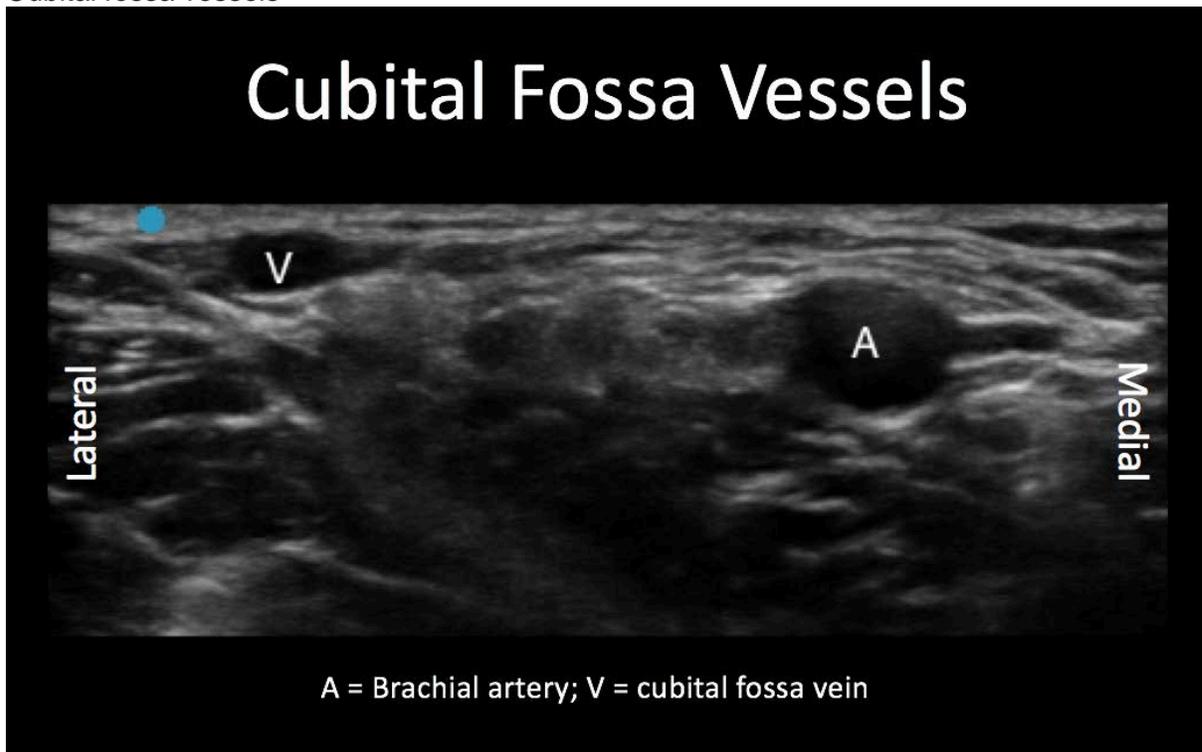
[Click here to watch the OSCE Overview video, which includes an example of this scenario.](#)

View sample ultrasound images of each structure on the following pages:

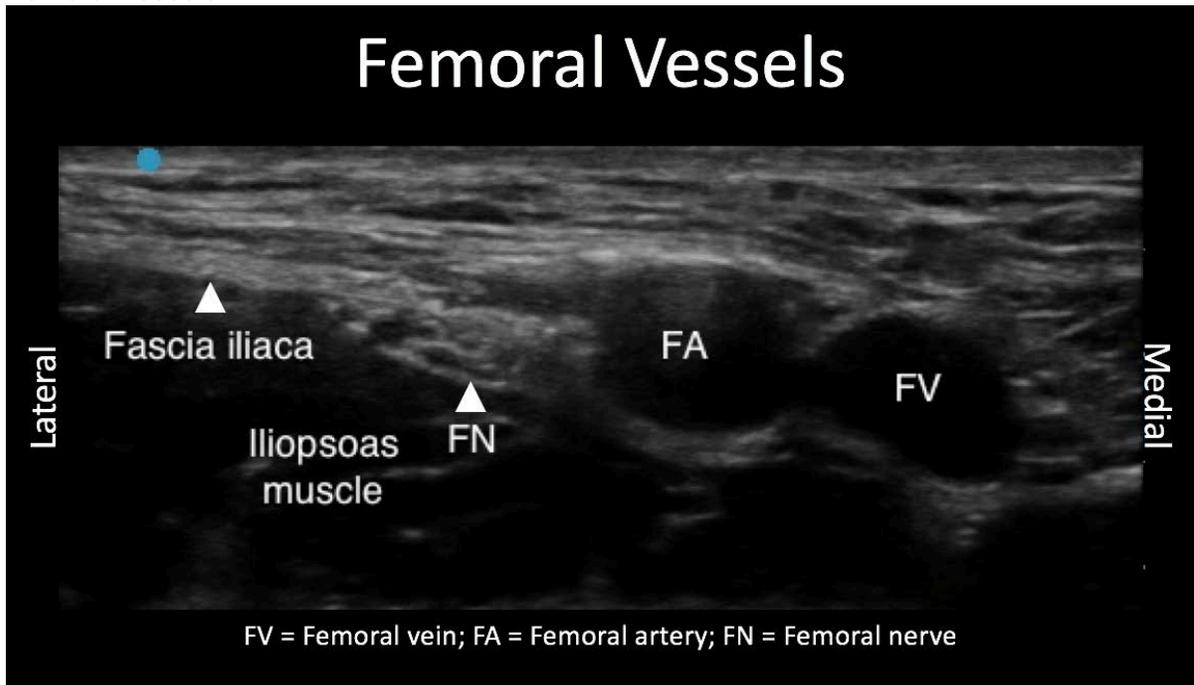
1. Vascular cannulation
 - i. Internal jugular vein



- ii. Cubital fossa vessels

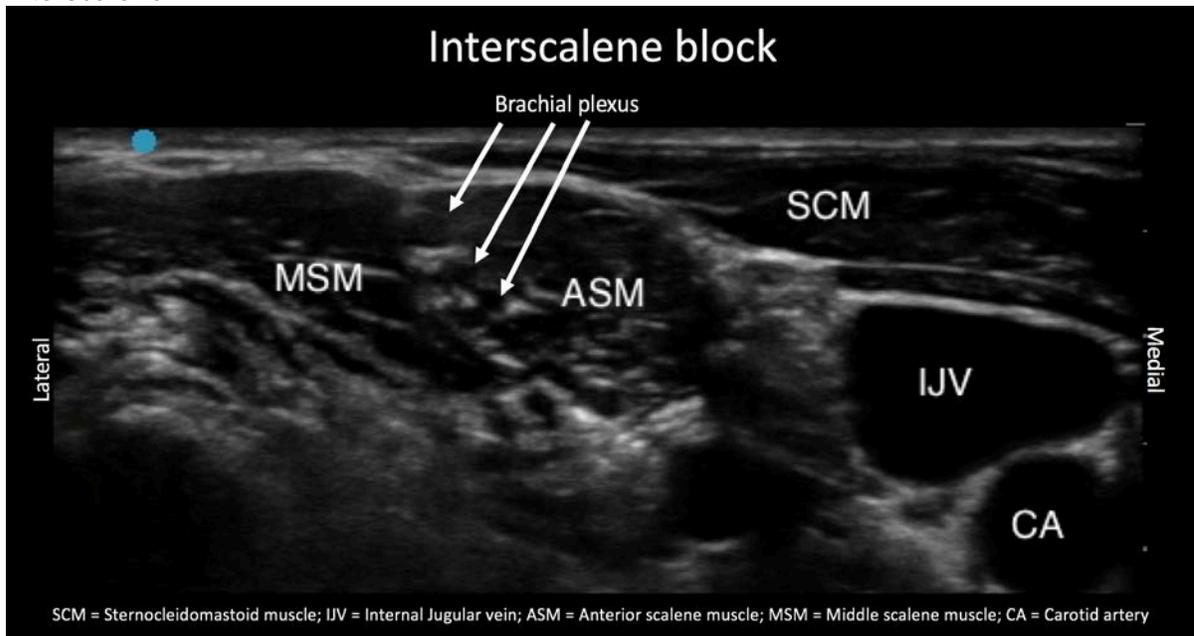


iii. Femoral vessels

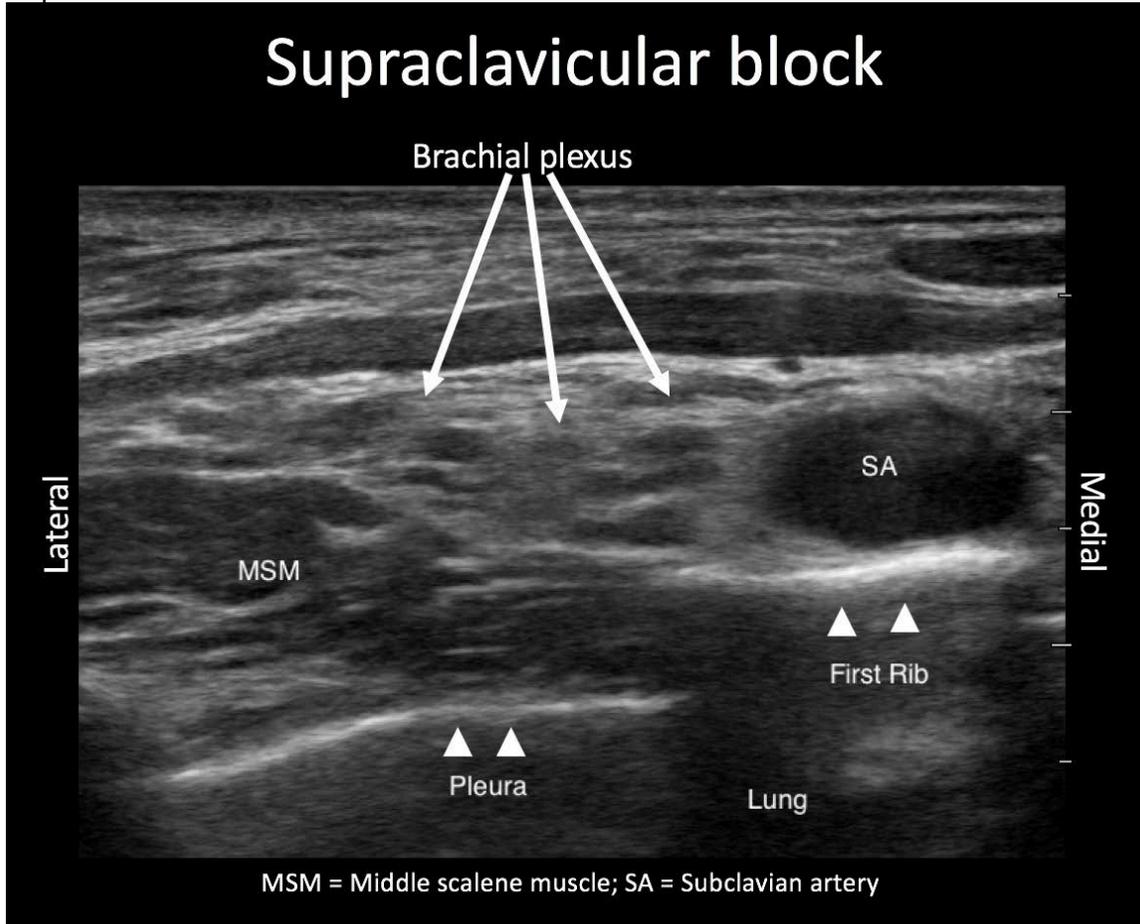


2. Nerve blocks

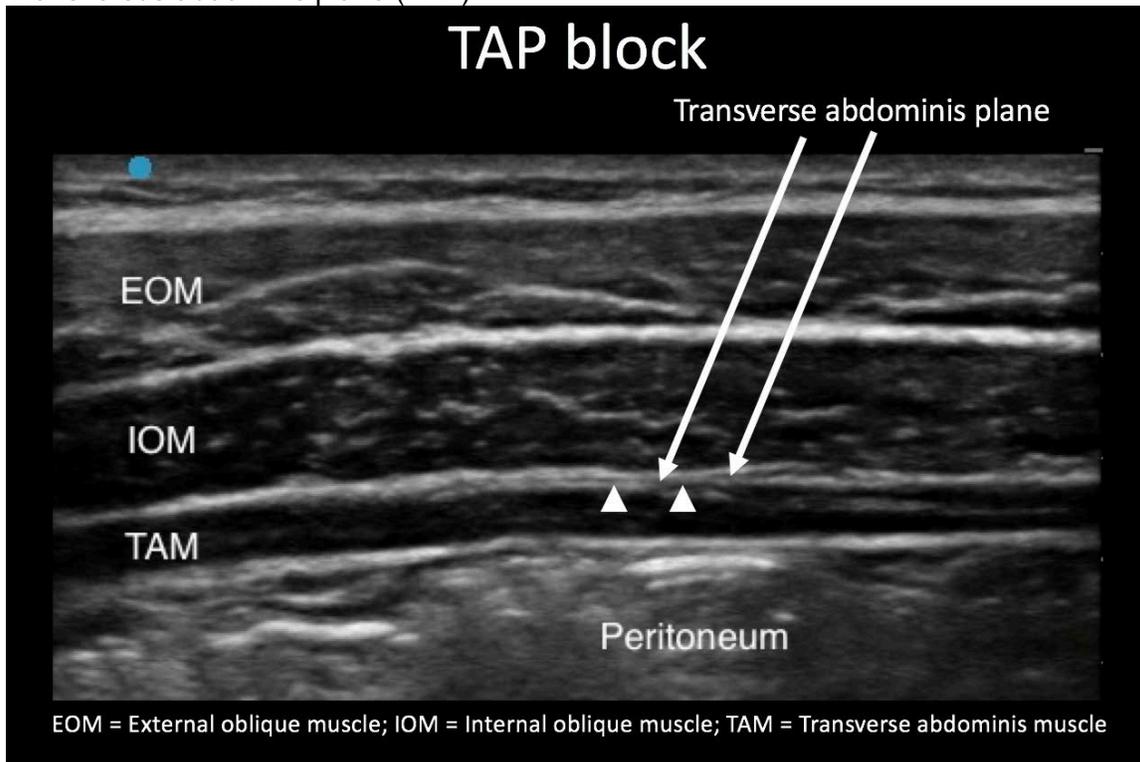
i. Interscalene



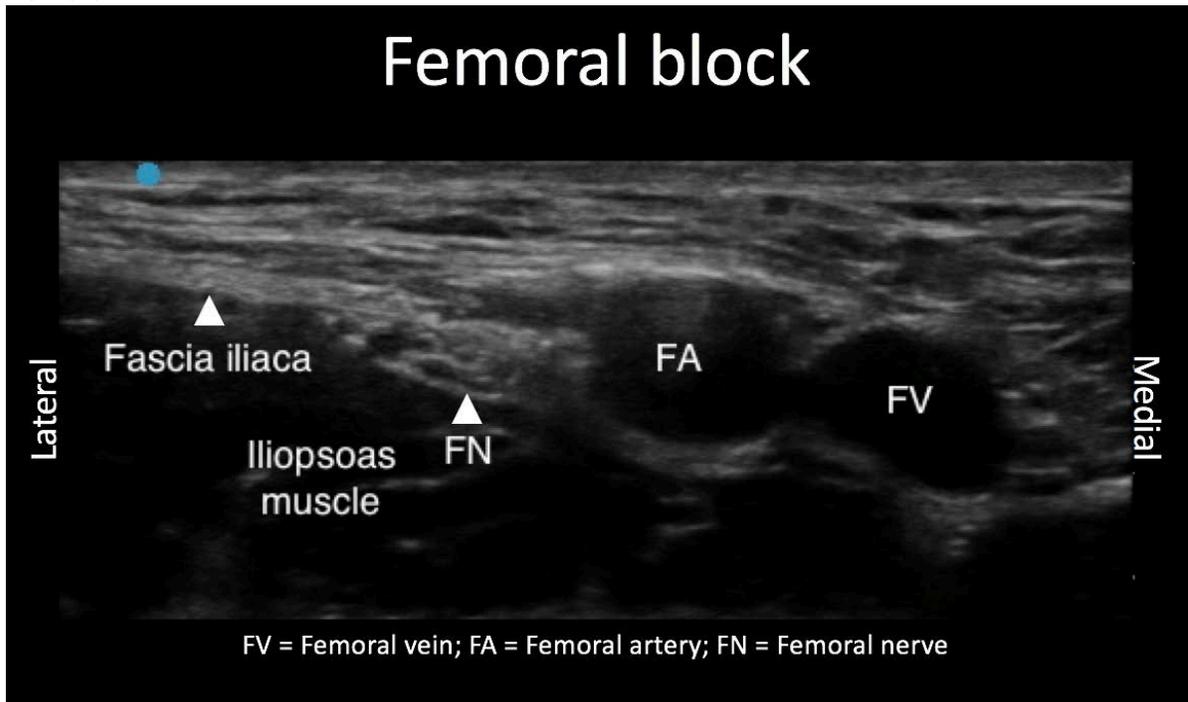
ii. Supraclavicular



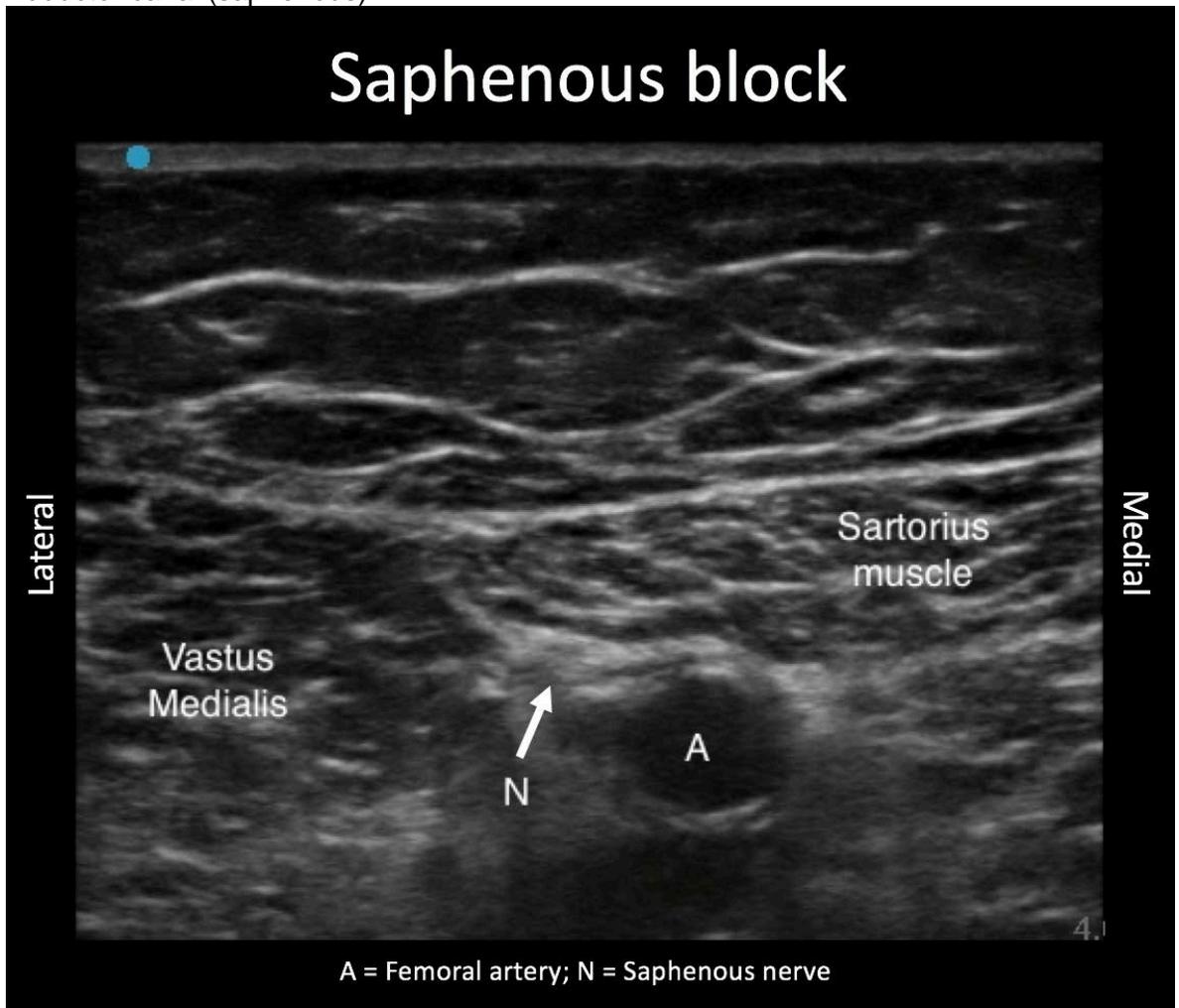
iii. Transversus abdominis plane (TAP)



iv. Femoral

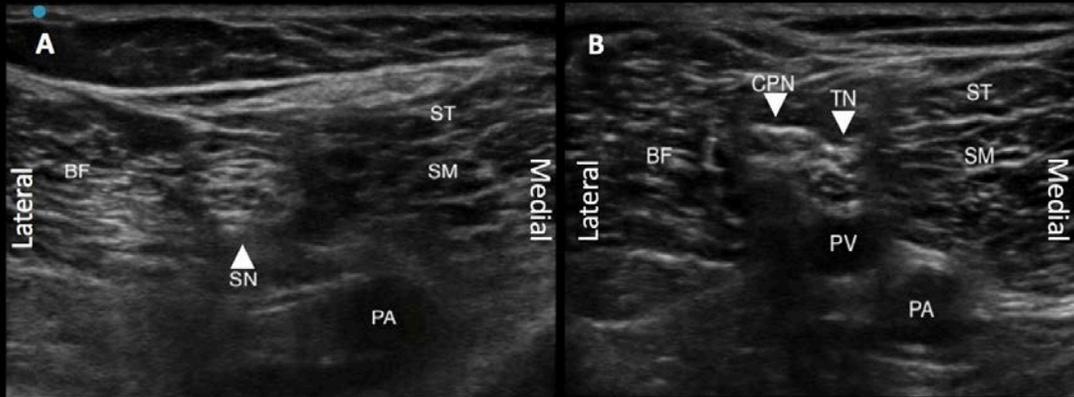


v. Adductor canal (saphenous)



vi. Popliteal

Popliteal Sciatic block



A. Popliteal Sciatic nerve before its division. B. Popliteal Sciatic nerve beyond its division.
SM = Semimembranosus muscle; ST = Semitendinosus muscle; BF = Biceps femoris muscle;
CPN = Common peroneal nerve; TN = Tibial nerve; PA = Popliteal artery; PV = Popliteal vein