

Shoulder Arthroscopy Curriculum

Description

All those with an interest in the shoulder should develop a basic level of proficiency and should be able to perform a thorough diagnostic exam, looking from both the anterior and the posterior portals. In addition, one should also be able to perform simple procedures. To master arthroscopic techniques, it is important to develop a basic foundation and then build on it in a systematic manner to advance one's surgical technique.

Objectives

- ◆ Be familiar with the arthroscopic anatomy of the shoulder
- ◆ Practice on how to manipulate arthroscopic tools inside the shoulder safely and efficiently
- ◆ Learn the common path of a systematic examination of the shoulder
- ◆ Learn how to identify and document pathological conditions in the shoulder
- ◆ Be familiar with portals establishment technique
- ◆ Learn the tips and tricks for successful subacromial decompression procedure
- ◆ Understand the amount of bone resection required for acromioplasty
- ◆ Practice on controlling complications during subacromial decompression

Target Audience

- ◆ Orthopedic surgery residents from PGY1 through PGY3
- ◆ Practicing orthopedic surgeons with limited experience performing arthroscopic surgery
- ◆ Beginning arthroscopists

Assumptions

- ◆ The learner has little experience with arthroscopy.
- ◆ The learner has prior arthroscopic motor skills practice.
- ◆ The learner has prior anatomical knowledge of the shoulder joint and the arthroscopic portals.

Suggested Time Length

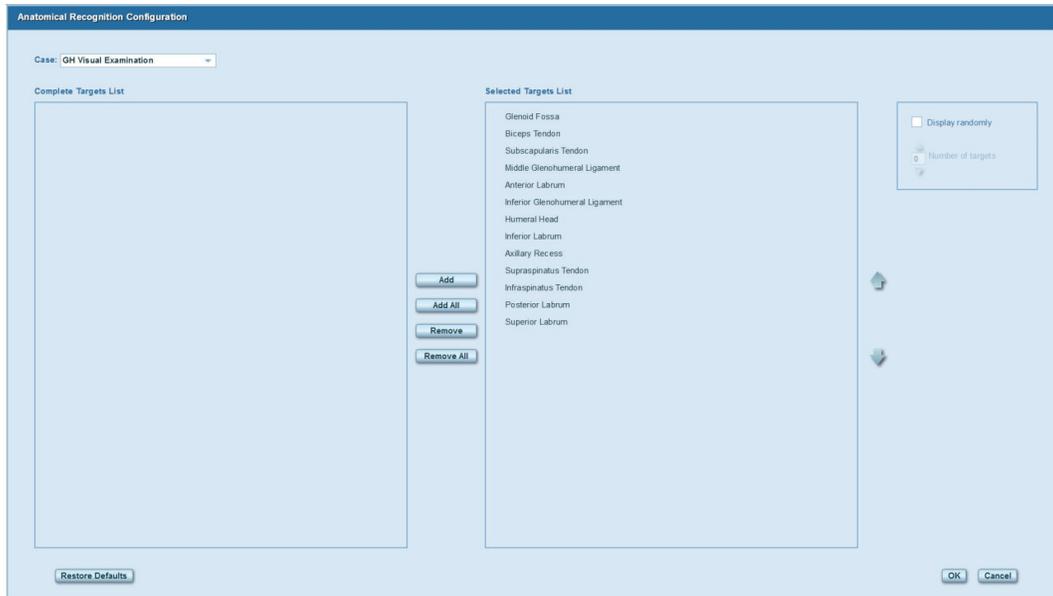
Completion of the entire course should take between 2-3 hours.

Authors

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Curriculum Steps and Tasks Description

Getting started- Anatomical Recognition Configuration



Set the targets as following:

GH Visual Examination:

- ◆ Biceps Tendon
- ◆ Superior Labrum
- ◆ Posterior Labrum
- ◆ Axillary Recess
- ◆ Inferior Labrum
- ◆ Glenoid Fossa
- ◆ Supraspinatus Tendon
- ◆ Humeral Head
- ◆ Middle Glenohumeral Ligament
- ◆ Subscapularis Tendon
- ◆ Anterior Labrum
- ◆ Infraspinatus Tendon
- ◆ Inferior Glenohumeral Ligament

GH Basic Probe Examination:

- ◆ Biceps Tendon
- ◆ Superior Labrum
- ◆ Posterior Labrum
- ◆ Axillary Recess
- ◆ Inferior Labrum
- ◆ Glenoid Fossa
- ◆ Supraspinatus Tendon
- ◆ Humeral Head
- ◆ Superior Glenohumeral Ligament
- ◆ Middle Glenohumeral Ligament
- ◆ Subscapularis Tendon
- ◆ Anterior Labrum
- ◆ Infraspinatus Tendon
- ◆ Inferior Glenohumeral Ligament

GH Advanced Probe Examination:

- ◆ Biceps Tendon
- ◆ Superior Labrum
- ◆ Posterior Labrum
- ◆ Glenoid Fossa
- ◆ Humeral Head
- ◆ Middle Glenohumeral Ligament
- ◆ Subscapularis Tendon
- ◆ Anterior Labrum
- ◆ Inferior Glenohumeral Ligament

SA Visual Examination:

- ◆ Undersurface of the Acromion
- ◆ Coracoacromial Ligament
- ◆ Greater Tuberosity
- ◆ Critical Zone of Supraspinatus
- ◆ Critical Zone of Infraspinatus
- ◆ AC Joint

- ◆ Supraspinatus
- ◆ Infraspinatus
- ◆ Posterior Deltoid
- ◆ Subscapularis
- ◆ Anterior Deltoid
- ◆ Lateral Deltoid

SA Basic Probe Examination:

- ◆ Undersurface of the Acromion
- ◆ Coracoacromial Ligament
- ◆ Greater Tuberosity
- ◆ AC Joint
- ◆ Supraspinatus
- ◆ Infraspinatus
- ◆ Posterior Deltoid
- ◆ Subscapularis
- ◆ Anterior Deltoid
- ◆ Lateral Deltoid

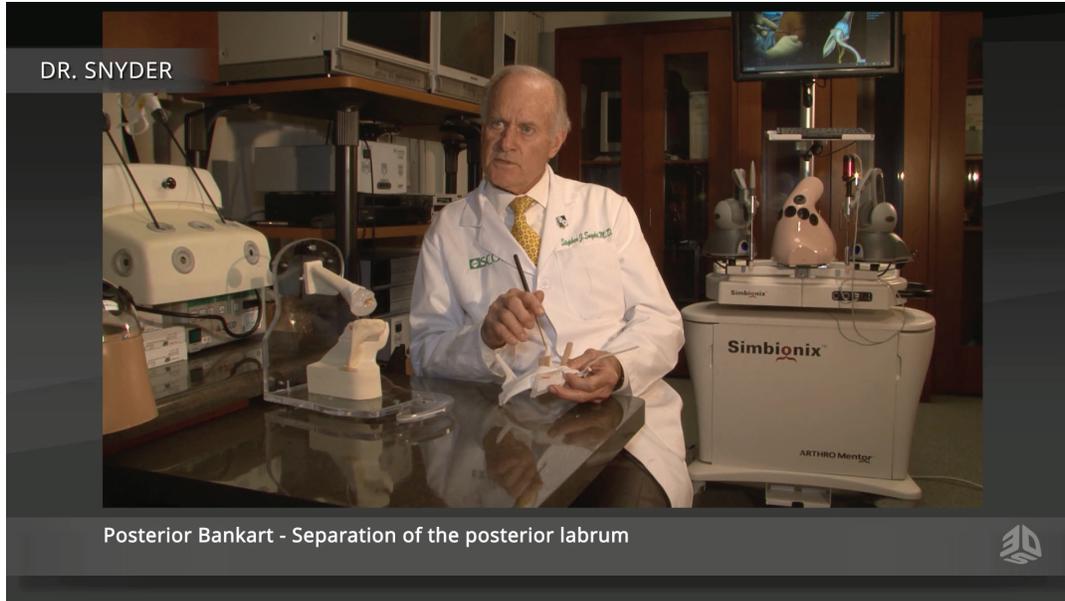
SA Advanced Probe Examination:

- ◆ Undersurface of the Acromion
- ◆ Attachment of Supraspinatus
- ◆ Critical Zone of Supraspinatus
- ◆ Attachment of Infraspinatus
- ◆ Critical Zone of Infraspinatus
- ◆ Supraspinatus
- ◆ Infraspinatus

Diagnostic examination of the Glenohumeral joint

Didactics

How to perform a systematic examination of the Glenohumeral joint



Hands on



GH Visual examination:

Task Description

- ◆ Insert the camera into one of the portals.
- ◆ Follow the instructions and locate the targets next on the stated structures. If needed, insert the camera through a different portal to obtain better visualization.
- ◆ Place the center of the viewfinder on the target, and hold the camera steady for 2 seconds until the target disappears.
- ◆ Repeat steps 2-3 for the next structures until the completion of the task.



GH basic probe examination

Task Description

- ◆ Insert the camera into one of the portals. Insert the probe into another portal.
- ◆ Follow the instructions and locate the target next to the stated structure. If needed, insert the camera into a different portal to obtain better visualization.
- ◆ Probe the target for 2 seconds until the target disappears. If needed, insert the probe into a different portal to obtain better access.
- ◆ Repeat steps 2-3 for the next targets until the completion of the task.



GH advanced probe examination

Task Description

- ◆ Insert the camera into one of the portals.
- ◆ Follow the instructions and locate the target on the stated structure. If needed, insert the camera into a different portal to obtain better visualization.
- ◆ Insert the probe into a portal with convenient access to the target and probe the line from end to end, until it disappears.
- ◆ Repeat steps 2-3 for the next targets until the completion of the task.



GH Case 1-5 and Random Case

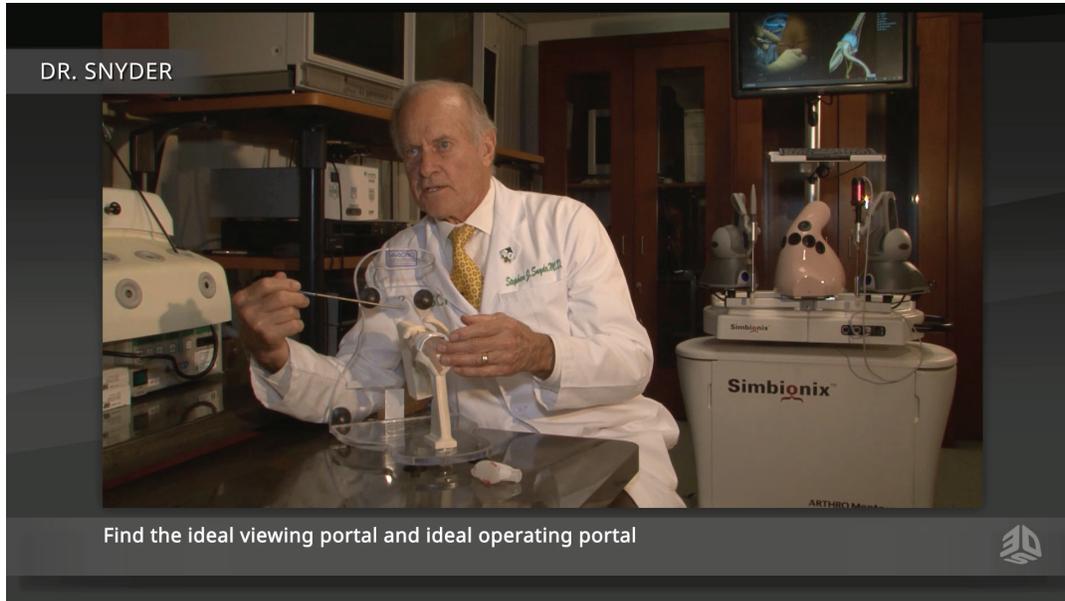
Task Description

- ◆ Perform a diagnostic examination of the shoulder joint.
- ◆ Use the pedal to take pictures of identified pathologies.
- ◆ Open the Trainee Report and describe the pathology that was documented in each picture.

Diagnostic examination of the Subacromial Space

Didactics

How to perform a systematic examination of the Subacromial space



Hands on



SA Visual examination

Task Description

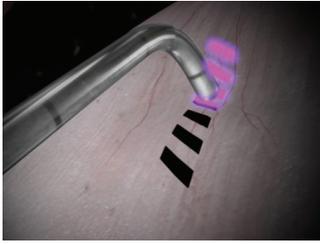
- ◆ Insert the camera into one of the portals.
- ◆ Follow the instructions and locate the targets next on the stated structures. If needed, insert the camera through a different portal to obtain better visualization.
- ◆ Place the center of the viewfinder on the target, and hold the camera steady for 2 seconds until the target disappears.
- ◆ Repeat steps 2-3 for the next structures until the completion of the task.



SA basic probe examination

Task Description

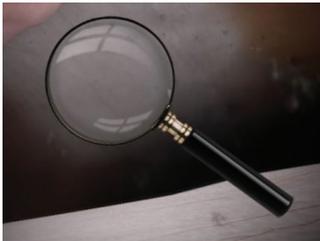
- ◆ Insert the camera into one of the portals. Insert the probe into another portal.
- ◆ Follow the instructions and locate the target next to the stated structure. If needed, insert the camera into a different portal to obtain better visualization.
- ◆ Probe the target for 2 seconds until the target disappears. If needed, insert the probe into a different portal to obtain better access.
- ◆ Repeat steps 2-3 for the next targets until the completion of the task.



SA advanced probe examination

Task Description

- ◆ Insert the camera into one of the portals.
- ◆ Follow the instructions and locate the target on the stated structure. If needed, insert the camera into a different portal to obtain better visualization.
- ◆ Insert the probe into a portal with convenient access to the target and probe the line from end to end, until it disappears.
- ◆ Repeat steps 2-3 for the next targets until the completion of the task.



SA Case 1-4 and Random Case

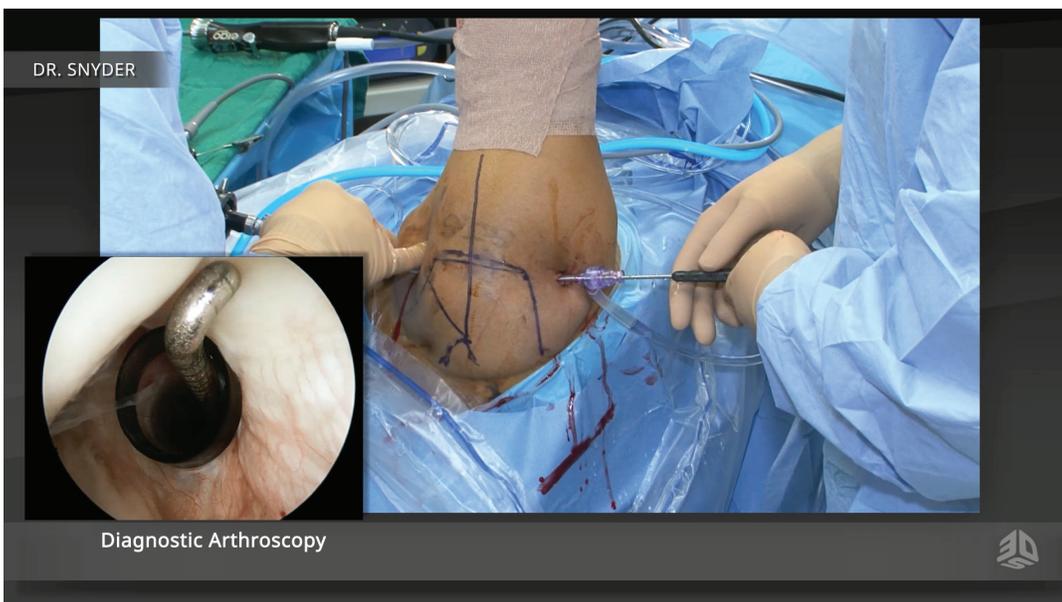
Task Description

- ◆ Perform a diagnostic examination of the Subacromial Space.
- ◆ Use the pedal to take pictures of identified pathologies.
- ◆ Open the Trainee Report and describe the pathology that was documented in each picture.

Subacromial Decompression

Didactics

OR Part 1: Portals Establishment, Diagnostic Arthroscopy and Bursoscopy



OR Part 2: Bursa Shaving and Soft Tissue Removal



OR Part 3: Acromion Resection and Distal Clavicle Resection



Subacromial Decompression Simulation Tutorial



Hands On



Subacromial Decompression

Task Description:

- ◆ Insert the camera and scan the Subacromial space. Use a probe to perform a diagnostic examination.
- ◆ Insert an ablation wand and use the left pedal to ablate soft tissue and expose the undersurface of the acromion.
- ◆ Insert an electrical burr and position it on the undersurface of the acromion.
- ◆ Activate the burr using the left pedal, and carefully resect the acromial bone spur. Use the right pedal to activate the suction and remove the debris.
- ◆ In case of bleeding, use the ablation wand (right pedal) for coagulation.