


Biceps and Triceps Brachii

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Syllabus PDF

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Disclosures

- Consultant: Bioclinica
- Contractor: POCUS PRO
- Advisory Board: Philips
- Book Royalties: Elsevier
- Not relevant to this lecture

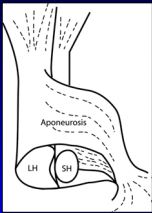
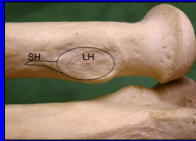
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 Fundamentals of Musculoskeletal Ultrasound are
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Biceps Brachii:

- Insertion: radial tuberosity
 - Short head: superficial, distal
 - Long head; deep, proximal
- No synovial sheath
- Bicipitoradial bursa

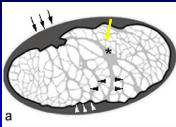
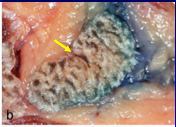



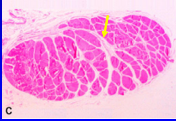
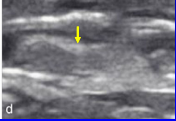
From: Eames M., et.al. J Bone Joint Surg 2007;89:1044



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Biceps Brachii: Terminal Bifurcation

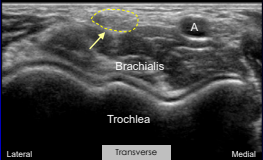
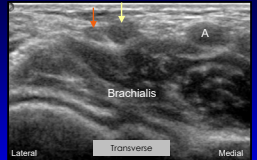




Note: endotenon septum (asterisk and arrows)

From: Blasi M., et.al. Surg Radiol Anat 2014; 36:17

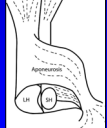

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Biceps Brachii: terminal bifurcation



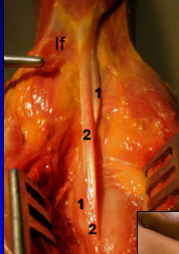
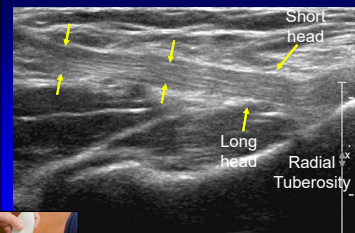
Note: toggling the transducer, which creates anisotropy allows visualization of two tendon heads

Courtesy of M. Chiavaras, Hamilton, Ontario

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Biceps Brachii Tendon: distal

1 = long head
2 = short head

Long Axis
Tagliafico A., et.al. Eur Radiol 2010

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Tendon Abnormalities:

- Tendinosis: hypoechoic, swollen
- Partial-thickness tear: anechoic focus, no retraction
- Full-thickness tear: discontinuity
 - Dynamic imaging: retraction

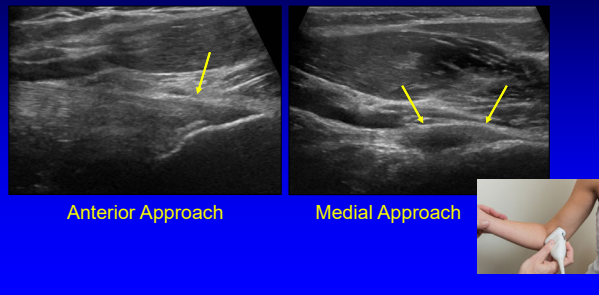
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Biceps Brachii: scanning techniques

- Anterior: sagittal plane
- Medial: oblique coronal plane
- Lateral: elbow flexed, dynamic (optional)
 - Problem solving: full thickness tear
- Dorsal: flexion, pronation (cobra)
 - Limited diagnostic information
 - US-guided biceps tendon injection

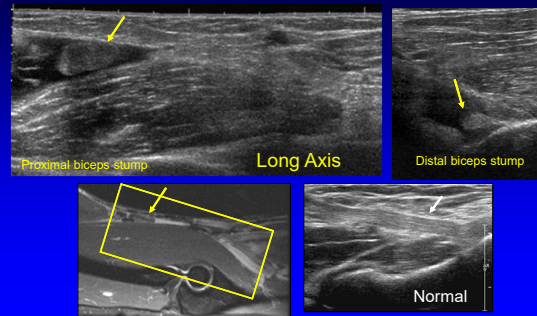
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Biceps Brachii Tendon: tendinosis



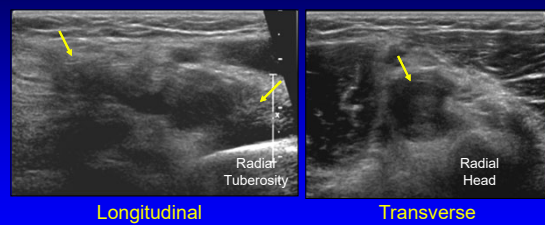
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Biceps Brachii Tendon: complete tear



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Biceps Tendon: non-retracted complete tear



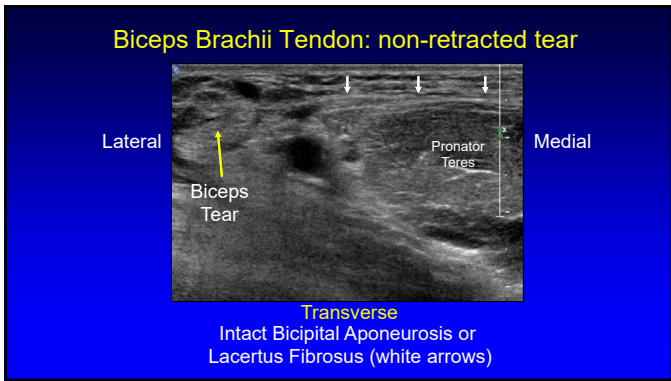
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Biceps Brachii Tendon: complete tear non-retracted

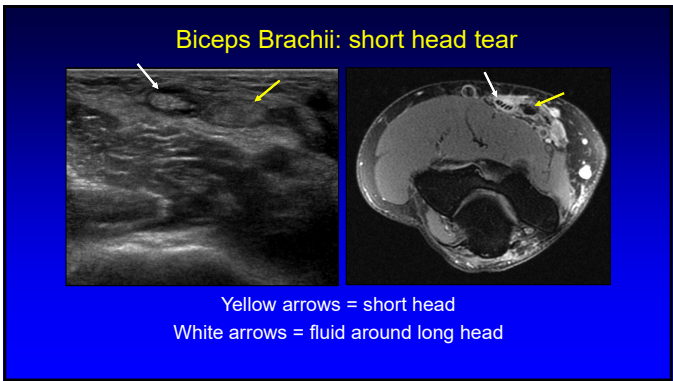


Kalume Brigido M. Eur Radiol 2009 ; 19:1817

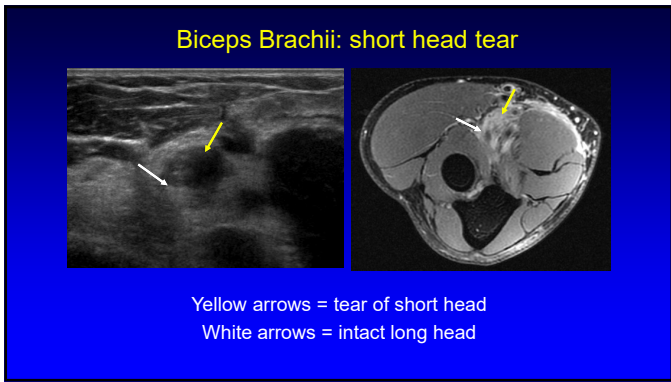
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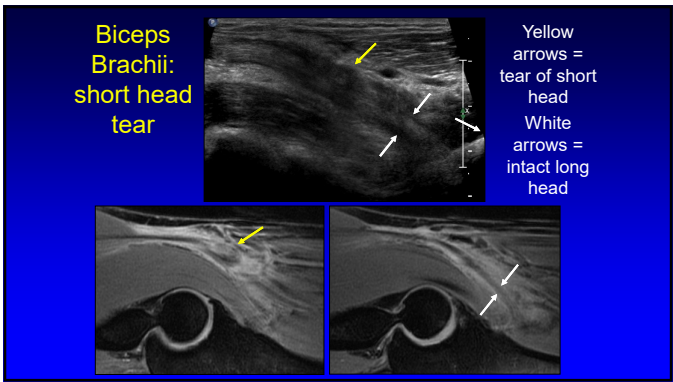
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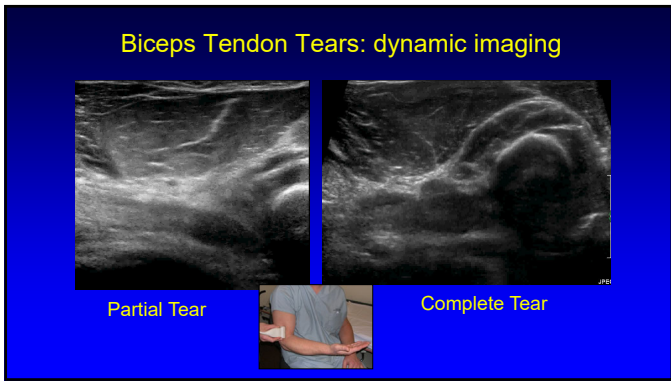
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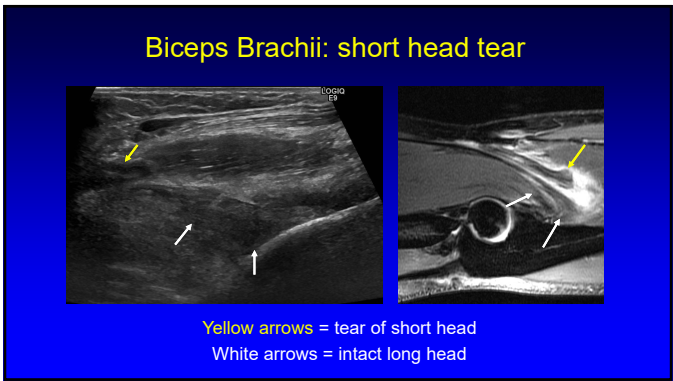
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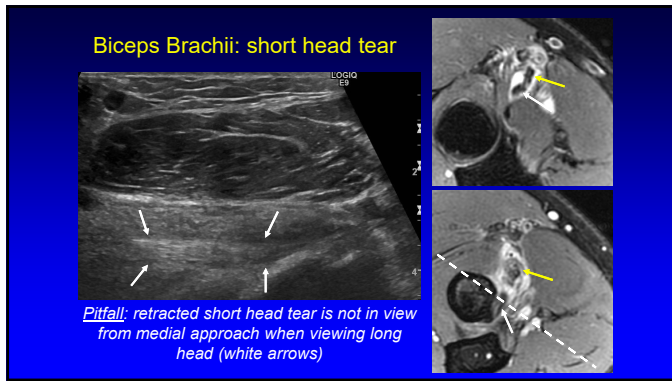
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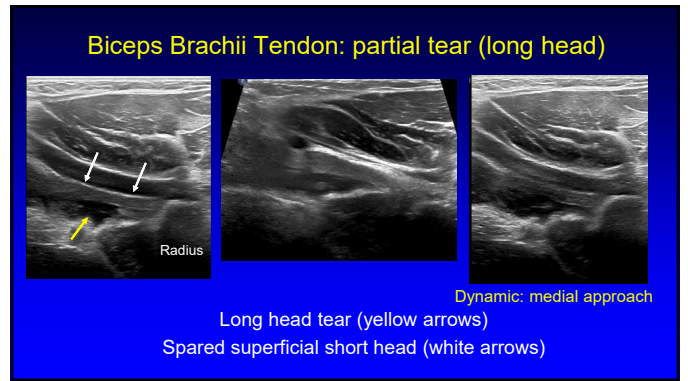
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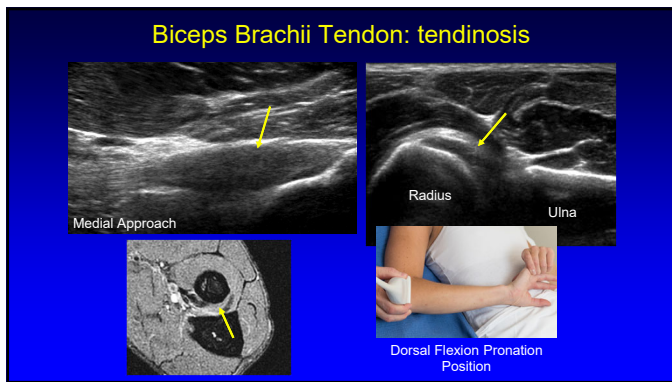
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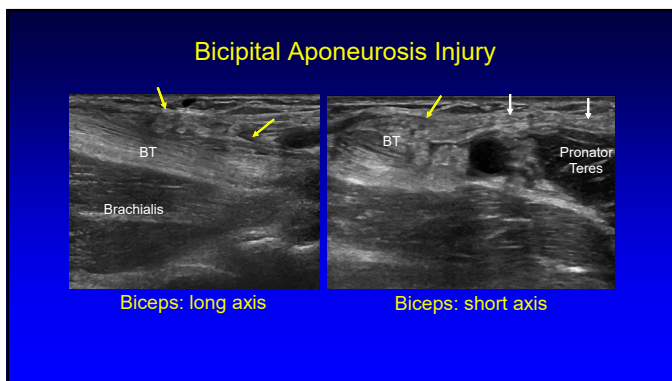
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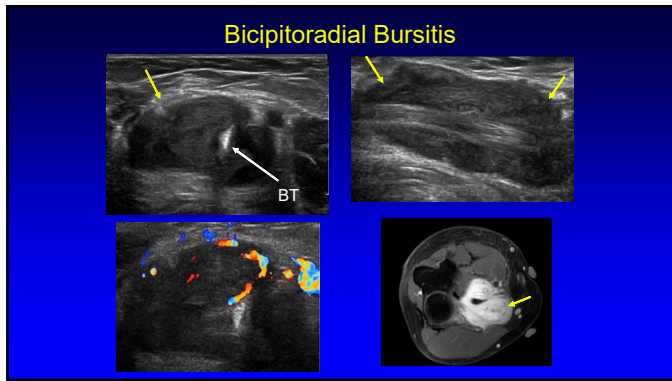
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Bicipitoradial Bursa

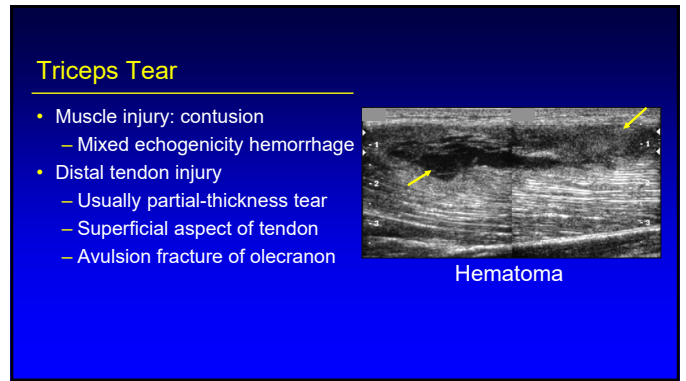
- Surrounds distal biceps
 - Does not communicate to elbow joint
 - No distal biceps tendon sheath
- If distended:
 - Mechanical, inflammatory
 - Characteristic "U" shape
 - Average: 1.8 – 2.5 cm in size
 - May displace deep branch of radial nerve

Skaif AY, Radiology 1999; 212:111

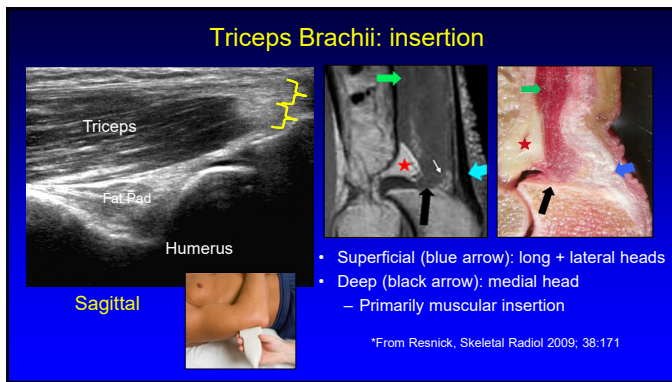
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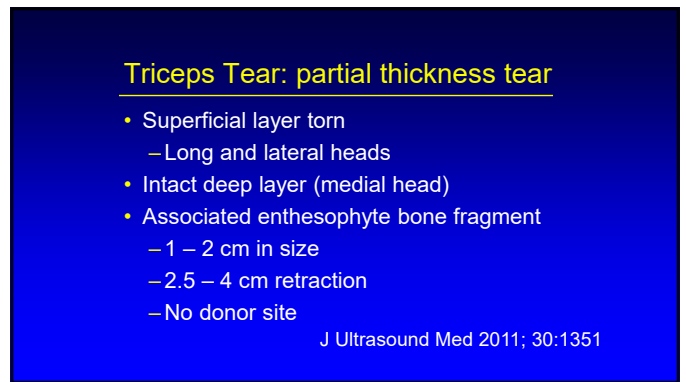
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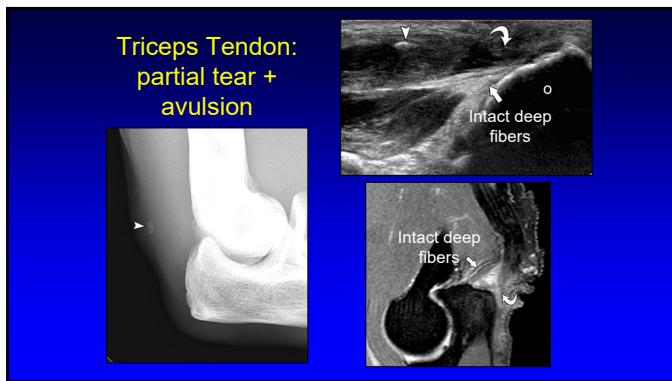
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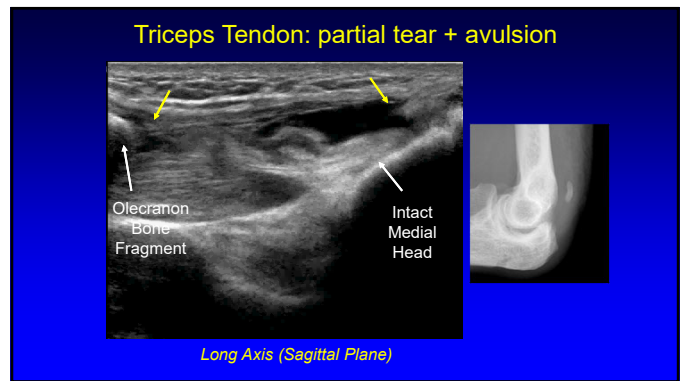
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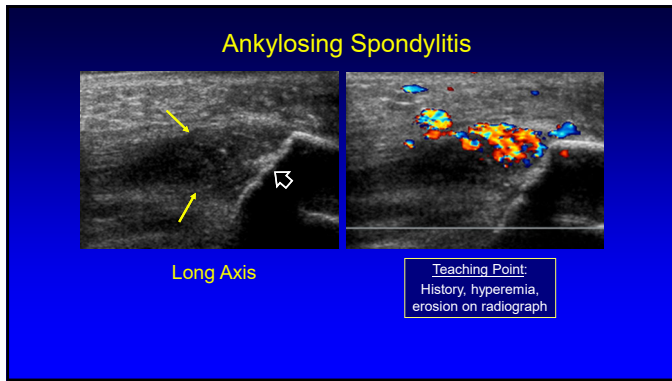
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Take-home Points:

- Biceps brachii:
 - Anatomy explains partial-thickness tears
 - Multiple scanning techniques
 - Dynamic imaging
- Triceps brachii:
 - Anatomy explains partial-thickness tears
 - Avulsed enthesophyte pitfall

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Thank you!

Syllabus on line and other educational material:
www.jacobsonmskus.com

Twitter handle: @jjacobsn

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