

Flexibook

Pocket Atlas of

# Sectional Anatomy

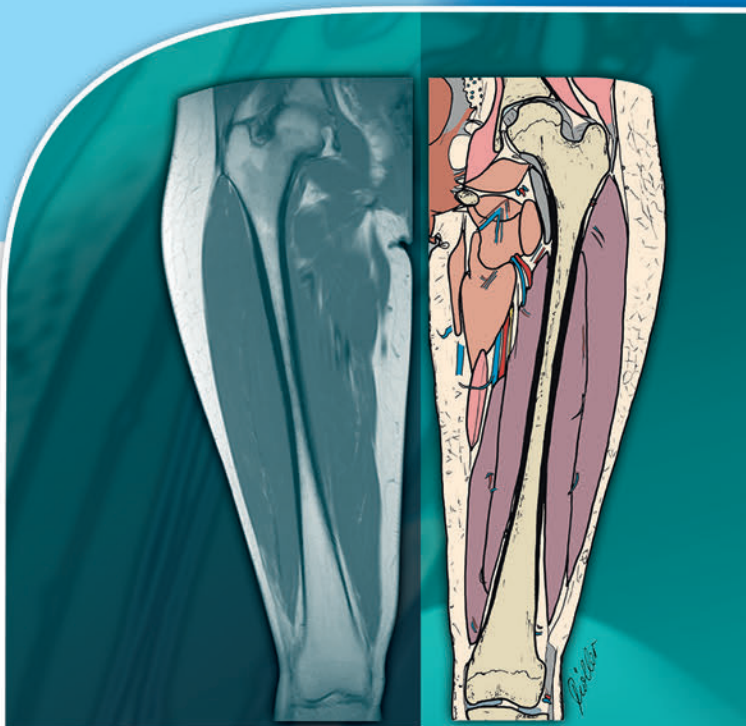
Computed Tomography and  
Magnetic Resonance Imaging

Second Edition

Torsten B. Moeller  
Emil Reif

Volume III: Spine, Extremities, Joints

*basic sciences*



Thieme







# Pocket Atlas of Sectional Anatomy

## Computed Tomography and Magnetic Resonance Imaging

Volume III  
Spine, Extremities, Joints

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Second Edition  
725 illustrations

**Thieme**  
Stuttgart · New York · Delhi · Rio de Janeiro

**Library of Congress Cataloging-in-Publication Data** is available from the publisher.

Original translation of 1st edition by Barbara Herzberger, MD, Munich, Germany

Illustrator: Barbara Gay, Stuttgart, Germany

1st French edition 2008  
1st Greek edition 2014  
1st Hungarian edition 2010  
1st Italian edition 2007  
1st Japanese edition 2008  
1st Korean edition 2010  
1st Polish edition 2007  
1st Portuguese edition 2009  
1st Russian edition 2010  
1st Spanish edition 2007  
1st Turkish edition 2007

© 2007, 2017, Georg Thieme Verlag KG

Thieme Publishers Stuttgart  
Rüdigerstrasse 14, 70469 Stuttgart, Germany  
+49 [0]711 8931 421,  
customerservice@thieme.de

Thieme Publishers New York  
333 Seventh Avenue, New York, NY 10001, USA  
+1-800-782-3488,  
customerservice@thieme.com

Thieme Publishers Delhi  
A-12, Second Floor, Sector-2, Noida-201301  
Uttar Pradesh, India  
+91 120 45 566 00,  
customerservice@thieme.in

Thieme Publishers Rio,  
Thieme Publicações Ltda.  
Edifício Rodolpho de Paoli, 25° andar  
Av. Nilo Peçanha, 50 – Sala 2508  
Rio de Janeiro 20020-906 Brasil  
+55 21 3172 2297 / +55 21 3172 1896

Cover design: Thieme Publishing Group

Typesetting by primustype Robert Hurler GmbH, Notzingen, Germany

Printed in Italy by L.E.G.O., Vincenza

ISBN 978-3-13-143172-1

Also available as an e-book:  
eISBN 978-3-13-201962-1

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**For my American relatives**

**Bernie and Arlene, Bryan and Nancy,  
Rick, Krista, and Ella Rose, Bill, Kayla,  
Abby and Liviana, Shirley, Mike,  
Austin and Amanda, Michael and  
Kendall, Audrey, Mike and Kristen,  
Katelyn and Matt, Claudia and Larry,  
Bryan and Stacy, Jamie and Shawn,  
Meghan and Jason**






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## Preface

We have been greatly gratified and much encouraged by the very positive responses to our volume III of the *Pocket Atlas of Sectional Anatomy*, the “Musculoskeletal Atlas,” and by its wide distribution and the many foreign-language editions. This success was a spur to further improvements. Accordingly, to the existing images of the first edition, which focus on the regions in the proximity of the joints, we have added new images and illustrations of the complete upper and lower arm and thigh and lower leg in two planes. With these we bridge and fill the previous gap regarding bone or soft tissue lesions of the diaphysis such as those caused by inflammation or tumors. The regular structure of the book has been preserved: the uniform color schemes for the different muscles, vessels, nerves, and other anatomical structures; and the comparison of high-quality (3-tesla) magnetic resonance images with the drawings. We thus hope to achieve precision and clarity and to facilitate locating and identifying the relevant anatomical structures.

As with the other volumes, the work would not have been possible without the invaluable support of so many dedicated assistants. We express our cordial thanks to all of them.

Special thanks go to Carina Engler for her consistent commitment to obtaining optimal images and to our entire MRI team, as well as to Nicole Bigga for making the 3-tesla images.

We wish the readers of this book once again as much pleasure and joy in using it as we had in making the images and the illustrations.

*Torsten B. Moeller, MD  
Emil Reif, MD*



 Arteries Nerves Veins Bones Fatty tissue Cartilage Tendon Disk, labrum etc. Fluid**Muscles of Trunk:**

Serratus anterior

Omohyoid

Trapezius

Subclavius

Intercostal

**Muscles of Shoulder:**

Deltoid

Infraspinatus

Pectoralis major and pectoralis minor

Subscapularis

Coracobrachialis

Latissimus dorsi

**Dorsal Muscles of Lower Arm:**

Supinator


Extensor pollicis longus and brevis

Extensor indicis

**Muscles of Hand:**

Dorsal and palmar interosseous

Lumbrical

**Volar Muscles of Upper Arm:**

Biceps brachii

Brachialis

**Dorsal Muscles of Upper Arm:**

Triceps brachii

Anconeus

**Dorsal Muscles of Lower Arm****(superficial layer):**

Extensor digitorum

Extensor digiti minimi

Extensor carpi ulnaris

**Radial Muscles of Lower Arm:**

Brachioradialis

Extensor carpi radialis longus  
and Extensor carpi radialis brevis**Volar Muscles of Lower Arm****(superficial layer):**

Pronator teres

Flexor digitorum superficialis

Flexor carpi radialis and flexor carpi ulnaris

Palmaris longus and palmaris brevis

**Volar Muscles of Lower Arm****(deep layer):**

Flexor digitorum profundus

Flexor pollicis longus

Pronator quadratus

**Muscles of Little (Fifth) Finger:**

Abductor digiti minimi brevis

Flexor digiti minimi brevis

Opponens digiti minimi

**Muscles of Thumb:**

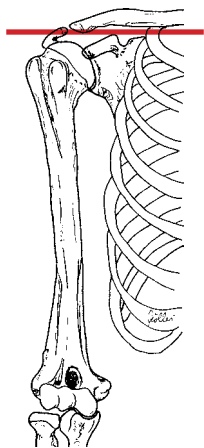
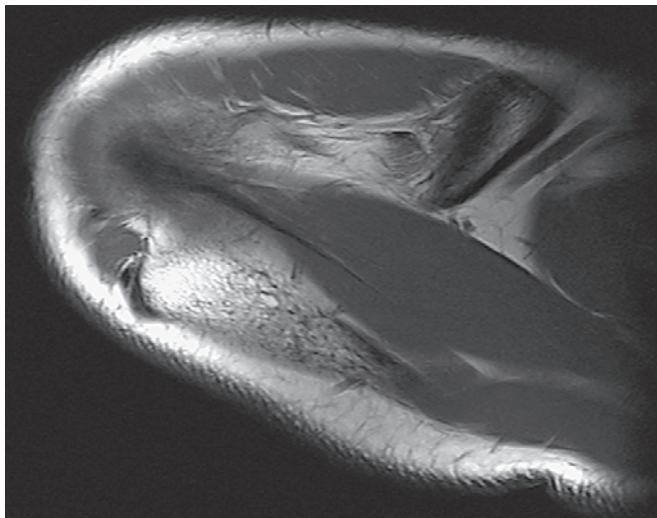
Abductor pollicis longus

and abductor pollicis brevis

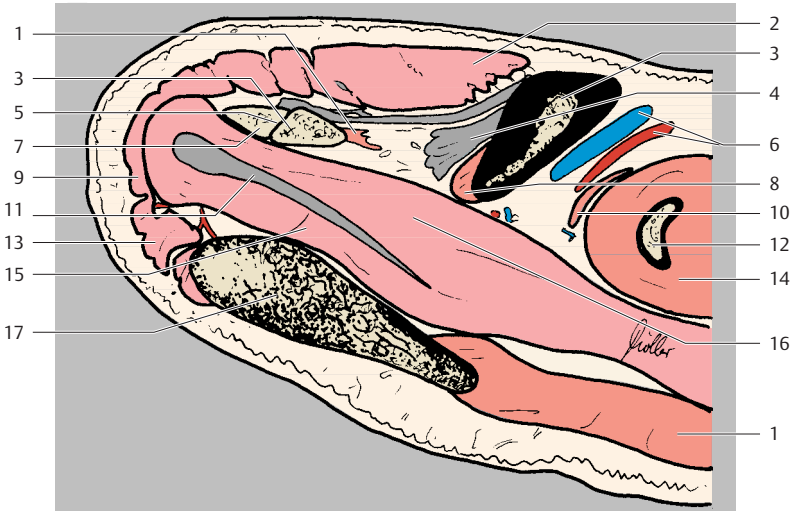
Opponens pollicis

Flexor pollicis brevis

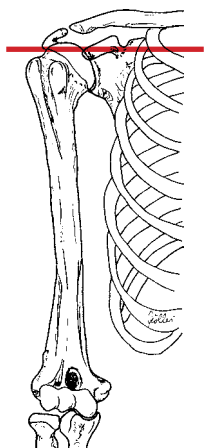
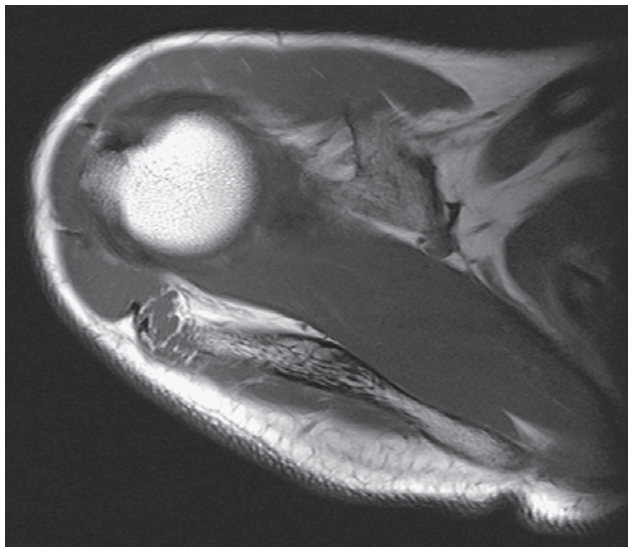
Adductor pollicis



Ventral  
Lateral  Medial  
Dorsal

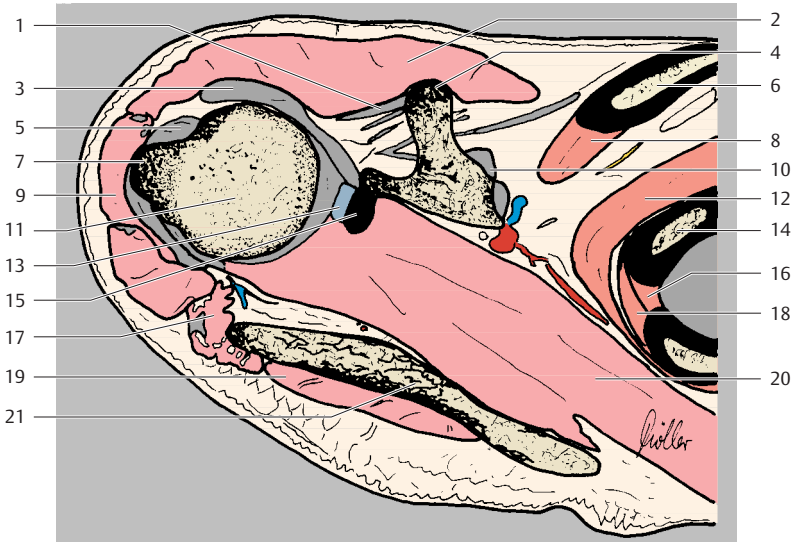


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|------------------------------------|--------------------------------------------|
| 1 Trapezius muscle                 | 11 Supraspinatus muscle (central tendon)   |
| 2 Deltoid muscle (clavicular part) | 12 Rib                                     |
| 3 Clavicle                         | 13 Deltoid muscle (spinal part)            |
| 4 Coracoclavicular ligament        | 14 Serratus anterior muscle                |
| 5 Acromioclavicular joint          | 15 Supraspinatus muscle (dorsal ligament)  |
| 6 Suprascapular artery and vein    | 16 Supraspinatus muscle (ventral ligament) |
| 7 Acromion                         | 17 Spine of scapula                        |
| 8 Subclavius muscle                |                                            |
| 9 Deltoid muscle (acromial part)   |                                            |
| 10 Omohyoid muscle                 |                                            |

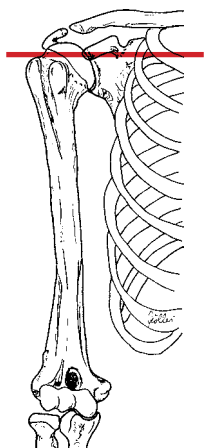
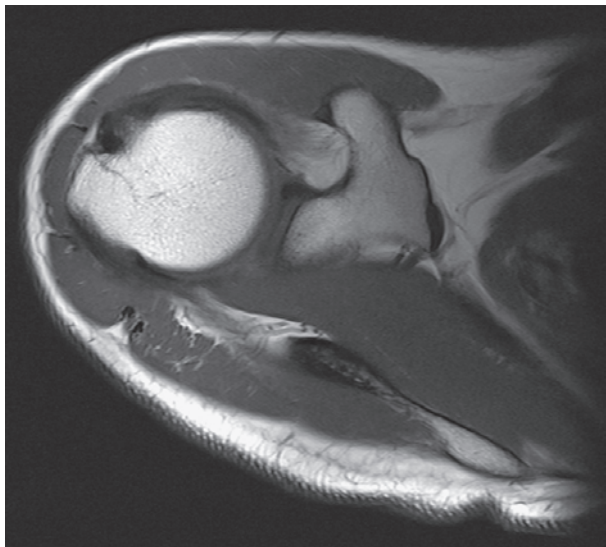


Ventral  
Lateral  Medial  
Dorsal

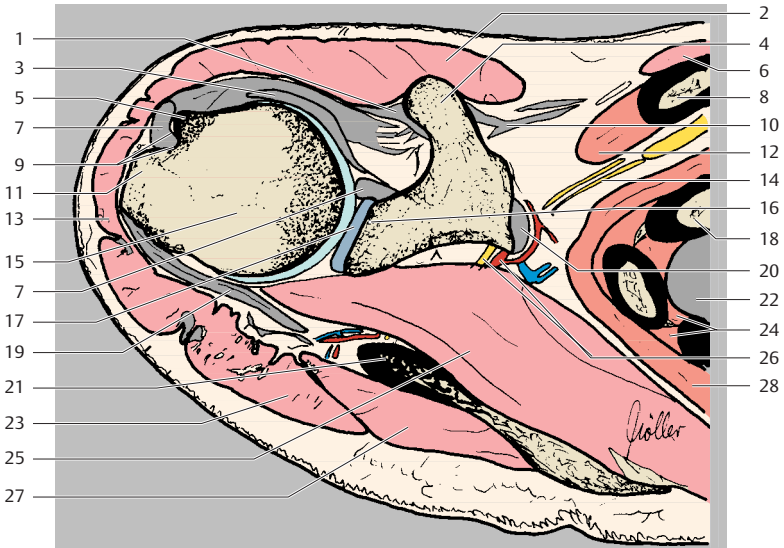




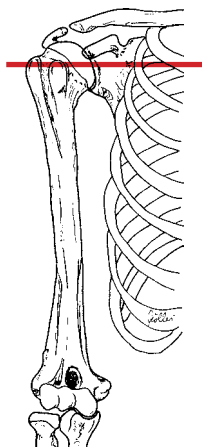
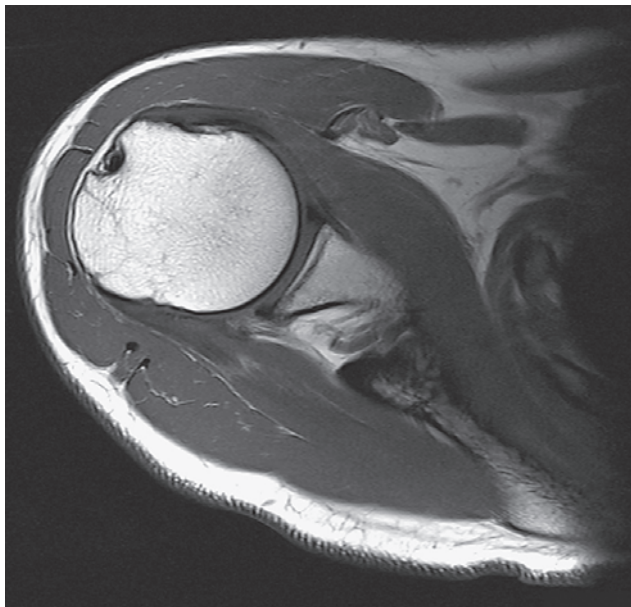
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|------------------------------------|---------------------------------|
| 1 Coracohumeral ligament           | 12 Serratus anterior muscle     |
| 2 Deltoid muscle (clavicular part) | 13 Superior glenoid labrum      |
| 3 Middle glenohumeral ligament     | 14 Rib                          |
| 4 Coracoid process                 | 15 Glenoid                      |
| 5 Supraspinatus muscle (tendon)    | 16 Internal intercostal muscle  |
| 6 Clavicle                         | 17 Deltoid muscle (spinal part) |
| 7 Humerus (greater tubercle)       | 18 External intercostal muscle  |
| 8 Subclavius muscle                | 19 Infraspinatus muscle         |
| 9 Deltoid muscle (acromial part)   | 20 Supraspinatus muscle         |
| 10 Coracoclavicular ligament       | 21 Spine of scapula             |
| 11 Head of humerus                 |                                 |



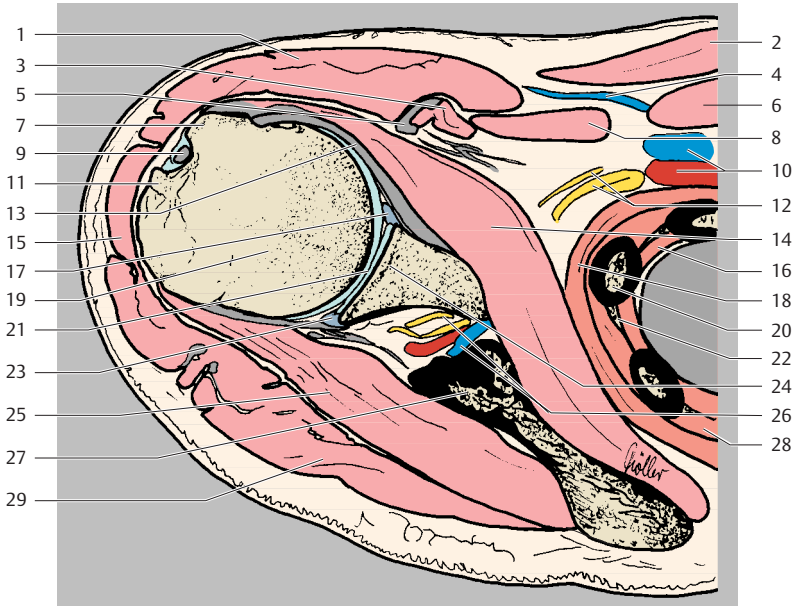
Ventral  
Lateral  Medial  
Dorsal



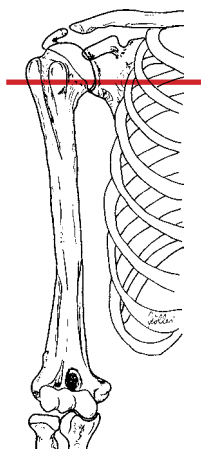
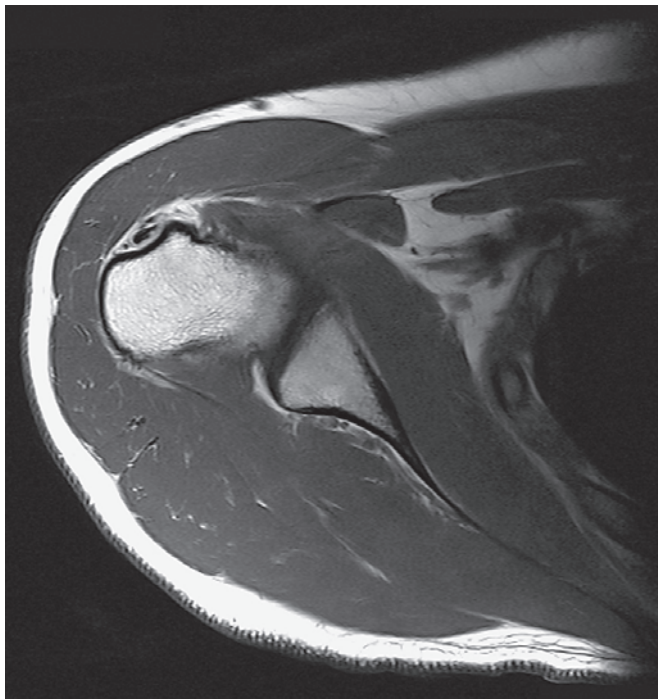
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|---------------------------------------------|----------------------------------------------|
| 1 Coracohumeral ligament                    | 15 Head of humerus                           |
| 2 Deltoid muscle (clavicular part)          | 16 Glenoid                                   |
| 3 Middle glenohumeral ligament              | 17 Superior glenoid labrum                   |
| 4 Coracoid process                          | 18 Rib                                       |
| 5 Humerus (lesser tubercle)                 | 19 Infraspinatus muscle (tendon attachment)  |
| 6 Pectoralis major muscle                   | 20 Coracoclavicular ligament                 |
| 7 Biceps brachii muscle (long head, tendon) | 21 Spine of scapula                          |
| 8 Clavicle                                  | 22 Lung                                      |
| 9 Intertubercular sulcus (bicipital groove) | 23 Deltoid muscle (spinal part)              |
| 10 Pectoralis minor muscle (tendon)         | 24 Internal and external intercostal muscles |
| 11 Humerus (greater tubercle)               | 25 Supraspinatus muscle                      |
| 12 Subclavius muscle                        | 26 Suprascapular artery, vein and nerve      |
| 13 Deltoid muscle (acromial part)           | 27 Infraspinatus muscle                      |
| 14 Brachial plexus                          | 28 Serratus anterior muscle                  |



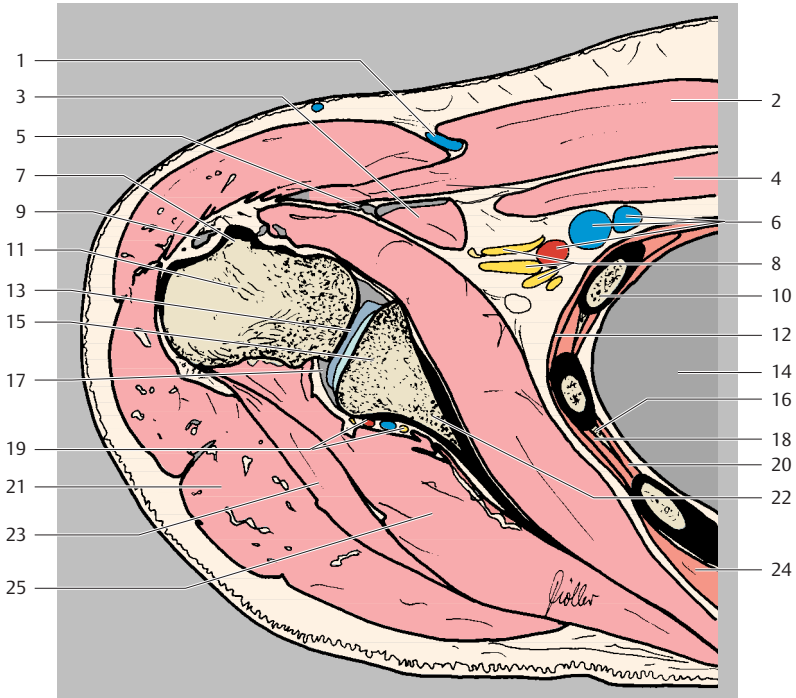
Ventral  
Lateral  Medial  
Dorsal



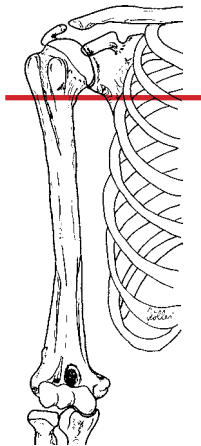
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|----------------------------------------------|------------------------------------------|
| 1 Deltoid muscle (clavicular part)           | 14 Subscapularis muscle                  |
| 2 Pectoralis major muscle                    | 15 Deltoid muscle (acromial part)        |
| 3 Coracobrachialis muscle (+ tendon)         | 16 Internal intercostal muscle           |
| 4 Cephalic vein                              | 17 Anterior glenoid labrum               |
| 5 Biceps brachii muscle (short head, tendon) | 18 Serratus anterior muscle              |
| 6 Subclavius muscle                          | 19 Head of humerus                       |
| 7 Humerus (lesser tubercle)                  | 20 Rib                                   |
| 8 Pectoralis minor muscle                    | 21 Humeroscapular joint                  |
| 9 Biceps brachii muscle (long head, tendon)  | 22 Intercostal artery, vein, and nerve   |
| 10 Axillary artery and vein                  | 23 Posterior glenoid labrum              |
| 11 Humerus (greater tubercle)                | 24 Glenoid                               |
| 12 Brachial plexus and subscapular nerve     | 25 Infraspinatus muscle                  |
| 13 Middle glenohumeral ligament              | 26 Suprascapular artery, vein, and nerve |
|                                              | 27 Scapula                               |
|                                              | 28 External intercostal muscle           |
|                                              | 29 Deltoid muscle (spinal part)          |



Ventral  
Lateral  Medial  
Dorsal

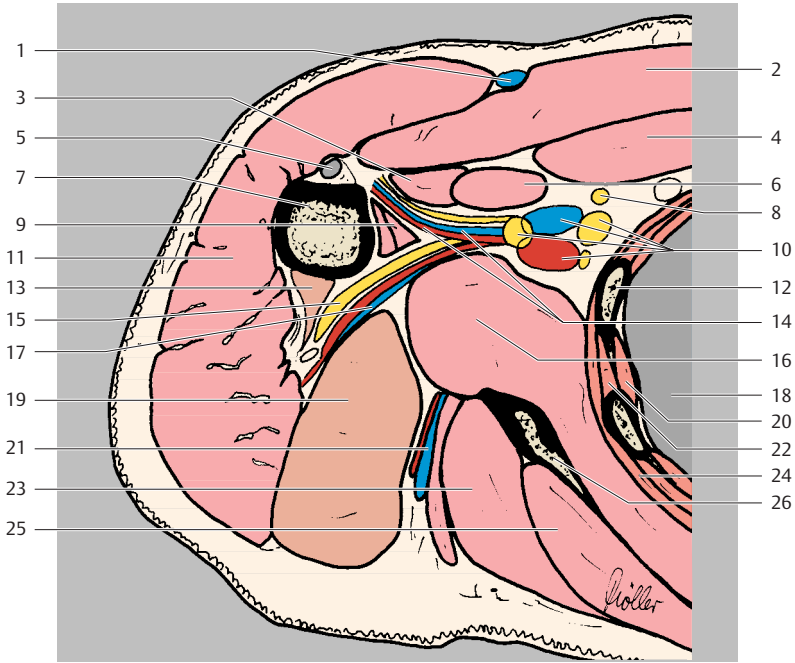


- |                                              |                                          |
|----------------------------------------------|------------------------------------------|
| 1 Cephalic vein                              | 13 Inferior glenoid labrum               |
| 2 Pectoralis major muscle                    | 14 Lung                                  |
| 3 Coracobrachialis muscle (+ tendon)         | 15 Glenoid                               |
| 4 Pectoralis minor muscle                    | 16 Intercostal artery, vein, and nerve   |
| 5 Biceps brachii muscle (short head, tendon) | 17 Joint capsule                         |
| 6 Axillary artery and vein                   | 18 External intercostal muscle           |
| 7 Humerus (lesser tubercle)                  | 19 Suprascapular artery, vein, and nerve |
| 8 Brachial plexus                            | 20 Internal intercostal muscle           |
| 9 Biceps brachii muscle (long head, tendon)  | 21 Deltoid muscle                        |
| 10 Rib                                       | 22 Scapula                               |
| 11 Humerus                                   | 23 Teres minor muscle                    |
| 12 Serratus anterior muscle                  | 24 Serratus posterior muscle             |
|                                              | 25 Infraspinatus muscle                  |



Ventral  
Lateral  Medial  
Dorsal





- 1 Cephalic vein
- 2 Pectoralis major muscle
- 3 Biceps brachii muscle (short head, tendon)
- 4 Pectoralis minor muscle
- 5 Biceps brachii muscle (long head, tendon)
- 6 Coracobrachialis muscle
- 7 Humerus
- 8 Long thoracic nerve
- 9 Latissimus dorsi muscle and teres major muscle
- 10 Axillary artery and vein and brachial plexus
- 11 Deltoid muscle
- 12 Rib
- 13 Triceps brachii muscle (lateral head)

- 14 Anterior circumflex humeral artery and vein
- 15 Axillary nerve
- 16 Subscapularis muscle
- 17 Posterior circumflex humeral artery and vein
- 18 Lung
- 19 Triceps brachii muscle (long head)
- 20 Internal intercostal muscle and innermost intercostal muscle
- 21 Circumflex scapular artery and vein
- 22 External intercostal muscle
- 23 Teres minor muscle
- 24 Serratus anterior muscle
- 25 Infraspinatus muscle
- 26 Scapula