

Figure 12.9 Volar compartment of the forearm (superficial layer). (Reprinted from Netter Anatomy Illustration Collection. ©Elsevier Inc. All Rights Reserved.)

the radial recurrent artery (Fig. 12.13E), arising just distal to the brachial artery bifurcation and is large enough to be used as a recipient vessel for microvascular tissue transfer.

GROSS REGIONAL ANATOMY OF THE FOREARM

The arrangement of compartments in the forearm is more complex than the arm. There are three fairly well-defined

compartments – the volar compartment, the dorsal compartment, and the mobile wad (Fig. 12.8).

The volar compartment is further divided into superficial, intermediate, and deep layers. In the superficial layer (Fig. 12.9), the pronator teres, flexor carpi radialis, palmaris longus and flexor carpi ulnaris arise from the common flexor origin (the medial epicondyle of the humerus). The middle layer is the flexor digitorum superficialis (Fig. 12.10), and the deep layer (Fig. 12.4) contains the flexor digitorum profundus, flexor pollicis longus, and the

pronator quadratus. The major neurovascular bundles are present on the volar aspect of the forearm, lying deep in the proximal forearm, but are immediately subfascial in the distal third of the forearm.

The dorsal compartment is arranged in two layers. There are four superficial muscles that fan out from the lateral epicondyle and these are the: anconeus, extensor carpi ulnaris, extensor digiti minimi, and extensor digitorum communis. The deeper layer contains three muscles that

power the thumb (abductor pollicis longus, extensor pollicis brevis, extensor pollicis longus), and the supinator and extensor indicis muscles. The posterior interosseous nerve innervates the extensor muscles and is the key anatomic structure from an operative standpoint (Fig. 12.6). The posterior interosseous artery runs under the superficial layer, close to the interosseous membrane and gives off multiple septocutaneous perforators between the extensor digiti minimi and the extensor carpi ulnaris.

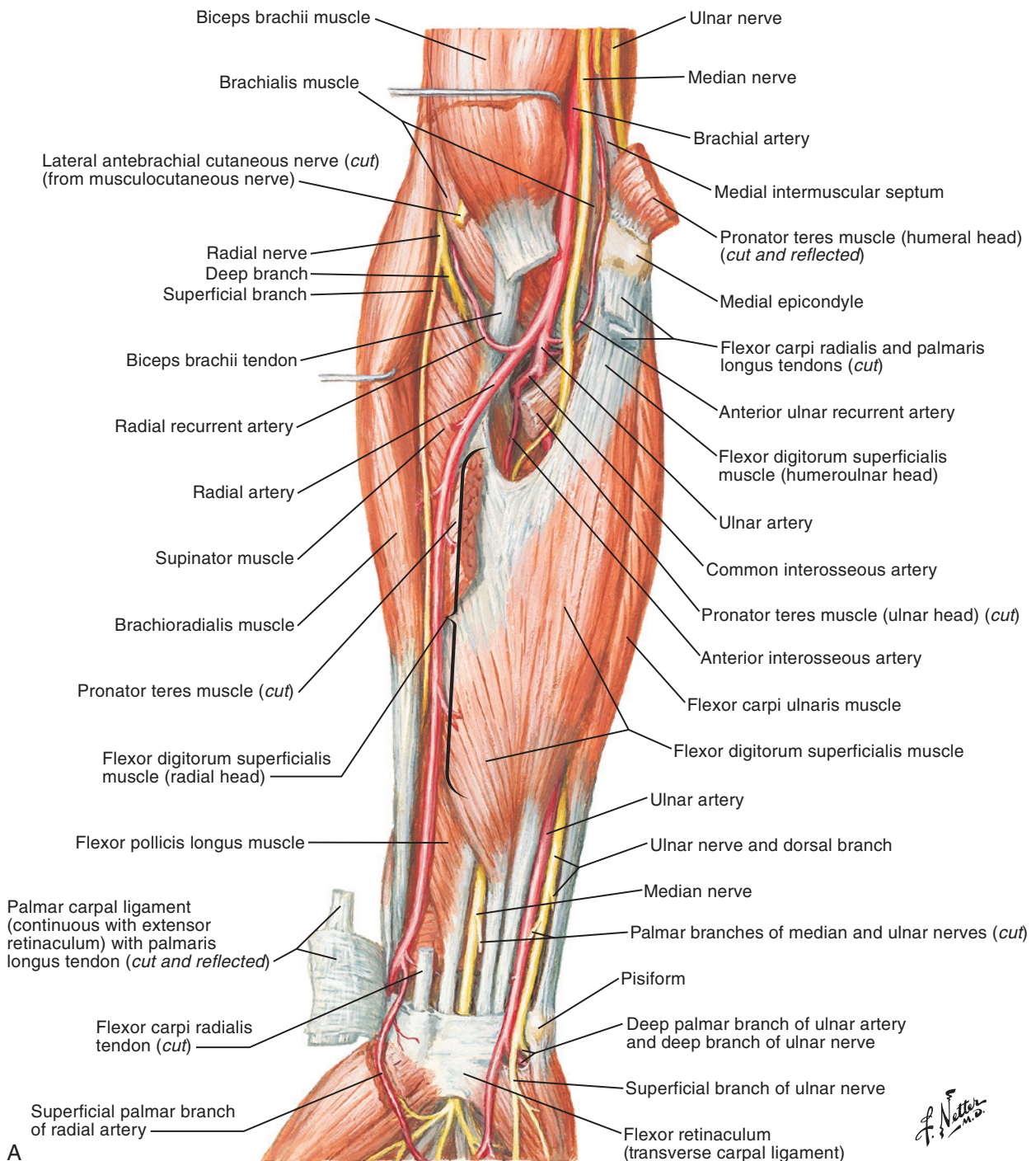


Figure 12.10 (A,B) Volar compartment of the forearm (intermediate and deep layers). (Reprinted from Netter Anatomy Illustration Collection. ©Elsevier Inc. All Rights Reserved.)

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