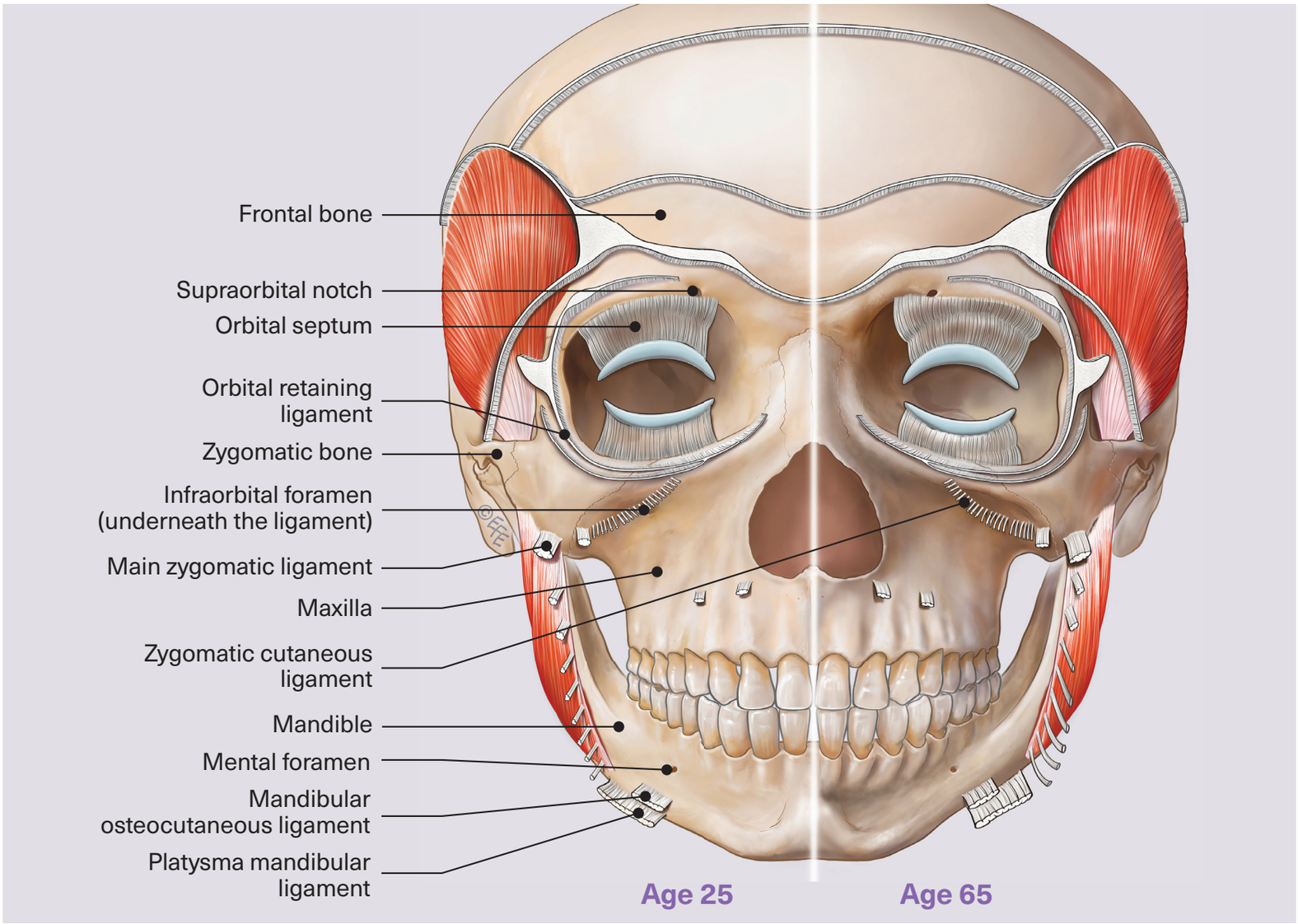
Allergan Medical Institute

CONSIDER FACIAL ANATOMY DURING PATIENT CONSULTATIONS

During assessment, it is important to review facial anatomy and how it changes over time. Changes in the skull, soft tissues, and skin play instrumental roles.[1]

Bone resorption and ligament attenuation over time[1-4]

Throughout life, the facial skeleton undergoes both growth and selective resorption, while ligaments lose strength and integrity. Weakness of ligamentous structures contributes to the formation of grooves, tear troughs, and eye bags.



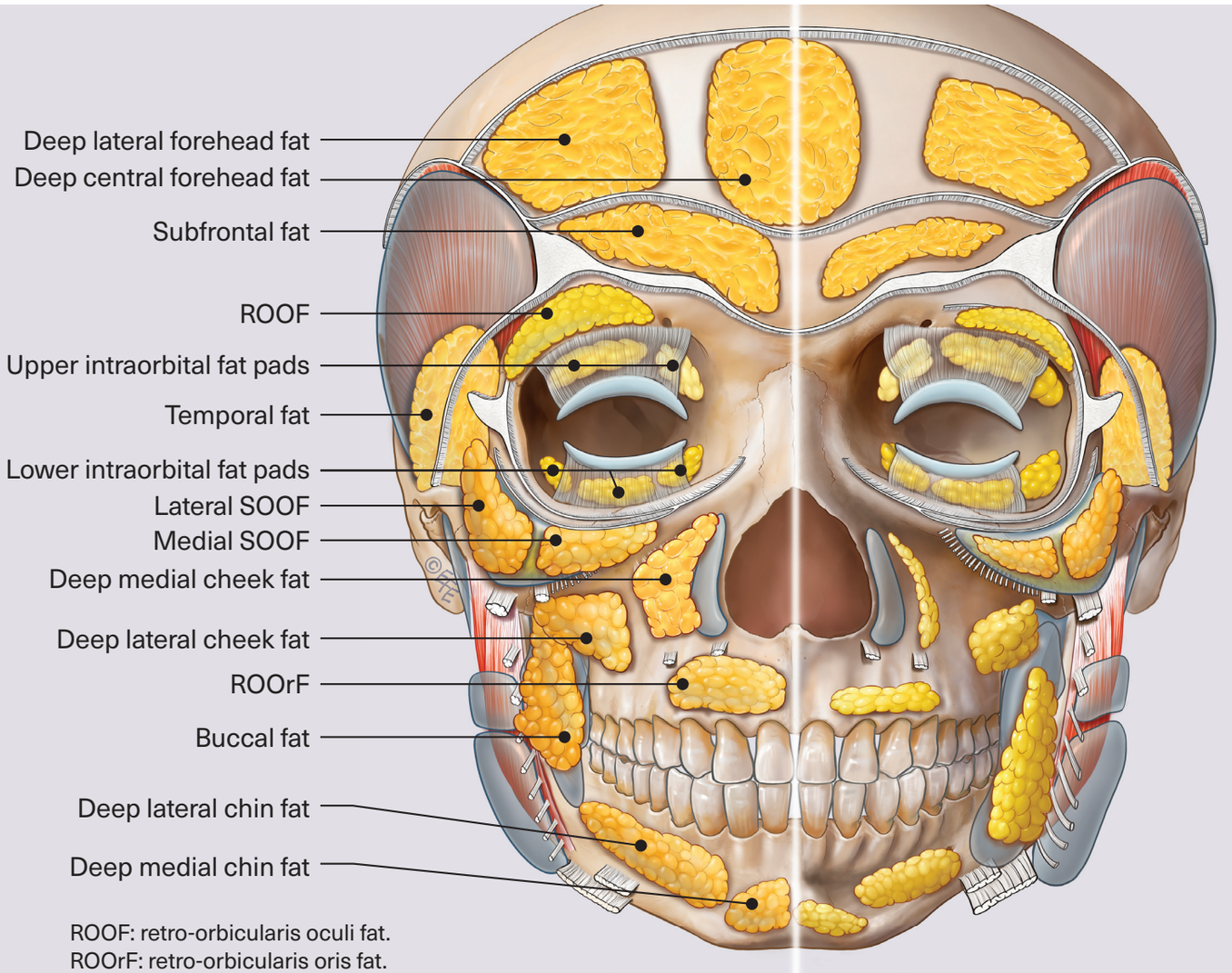
Ligaments connect the dermis to the underlying periosteum creating strong “stapling” or “tethering” effects.

Review deep fat pads on the next page ›

ANATOMY OVERVIEW

Deep fat pads over time[4-10]

With age, deep fat pads get thinner, demonstrate deflation, and experience volume loss. Volume loss of deep fat compartments leads to changes in facial shape and contour over time. As a result, the aged face won't look as round and firm as the youthful face.

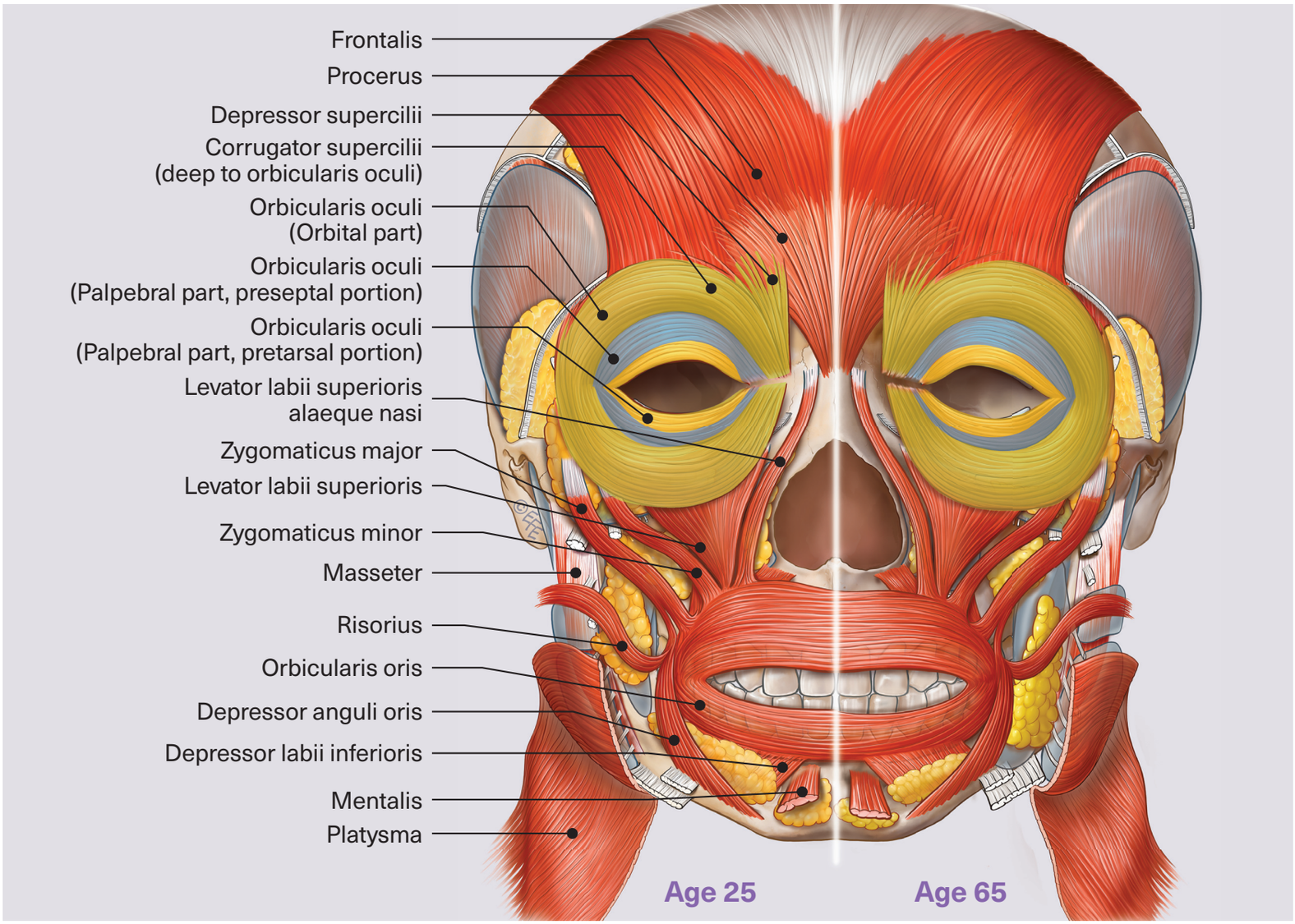


ROOF: retro-orbicularis oculi fat.
ROOrF: retro-orbicularis oris fat.
SOOF: suborbicularis oculi fat.

Review mimetic muscles on the next page ›

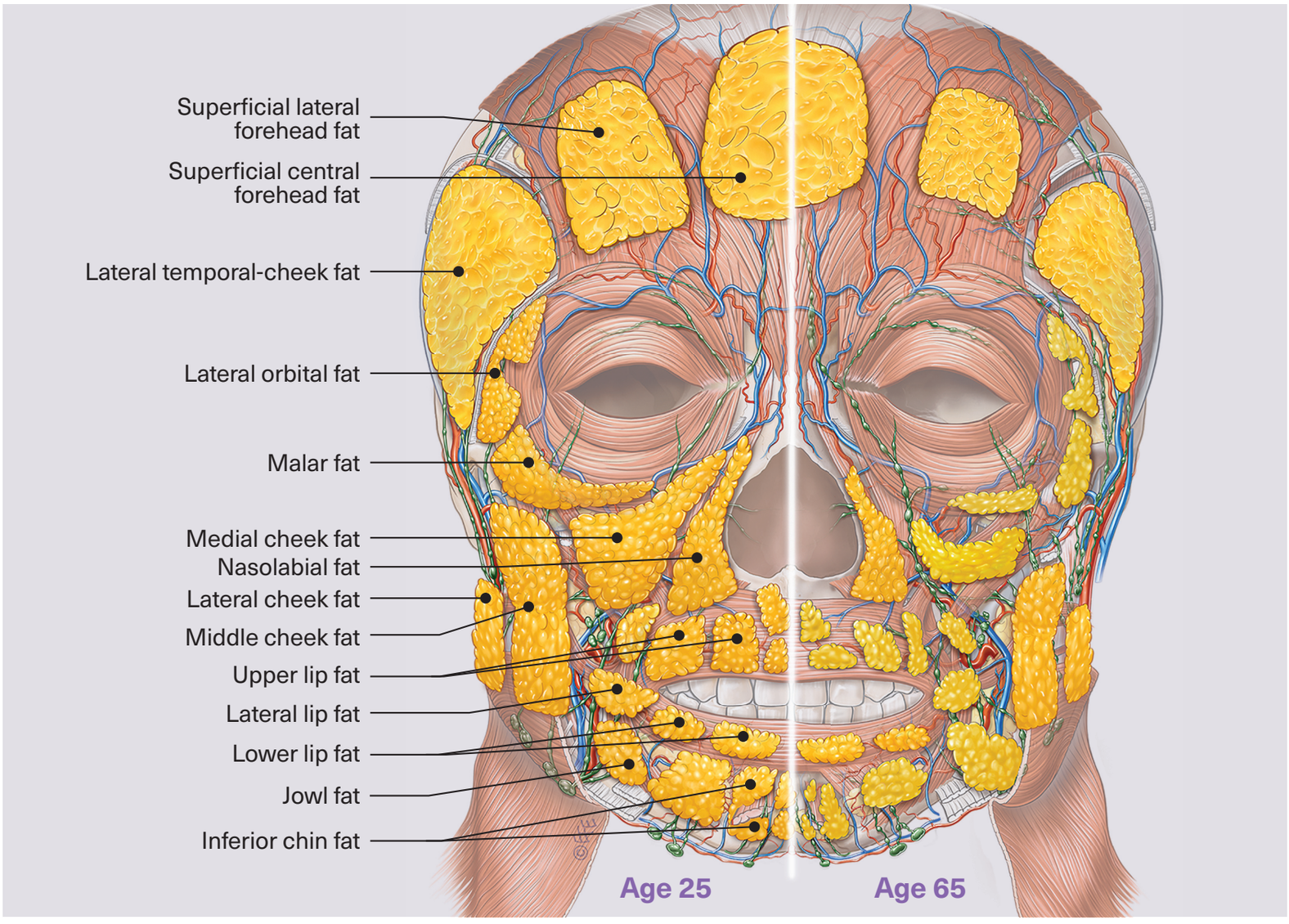
Mimetic muscles over time[1-3]

While mimetic muscles relate to facial movement, they also play a role in maintaining soft-tissue support. Muscular aging can cause declining muscle mass and strength.



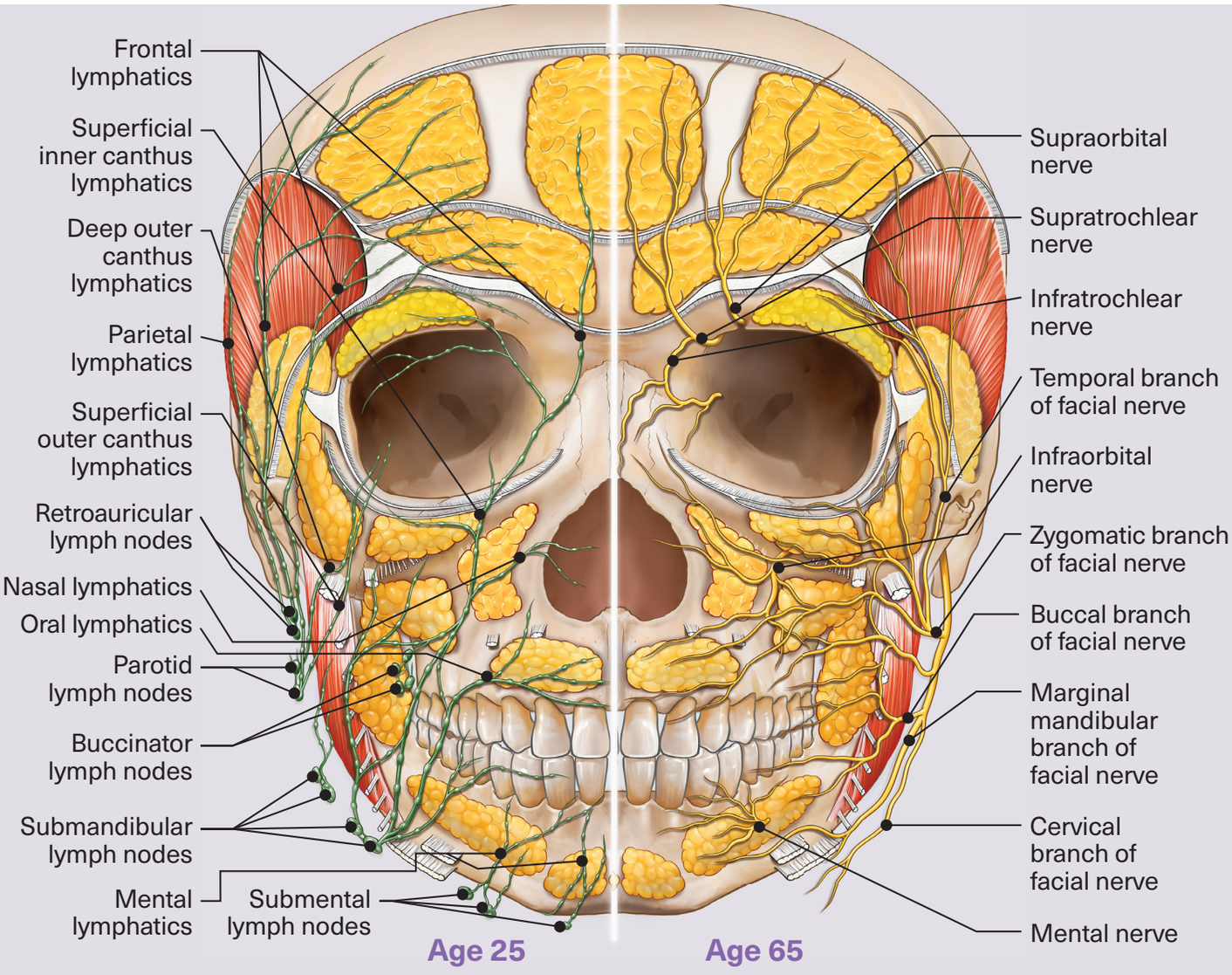
Superficial fat pads over time[1,2,4,6]

The superficial fat compartments are divided by fascial septa containing vascular structures.
The individual fat compartments age at different rates and vary metabolically;
some sites are prone to volume loss while others may hypertrophy.
These changes contribute to segmental loss of fullness and the signs of aging.



Lymphatics and nerves [1,2,4,11]

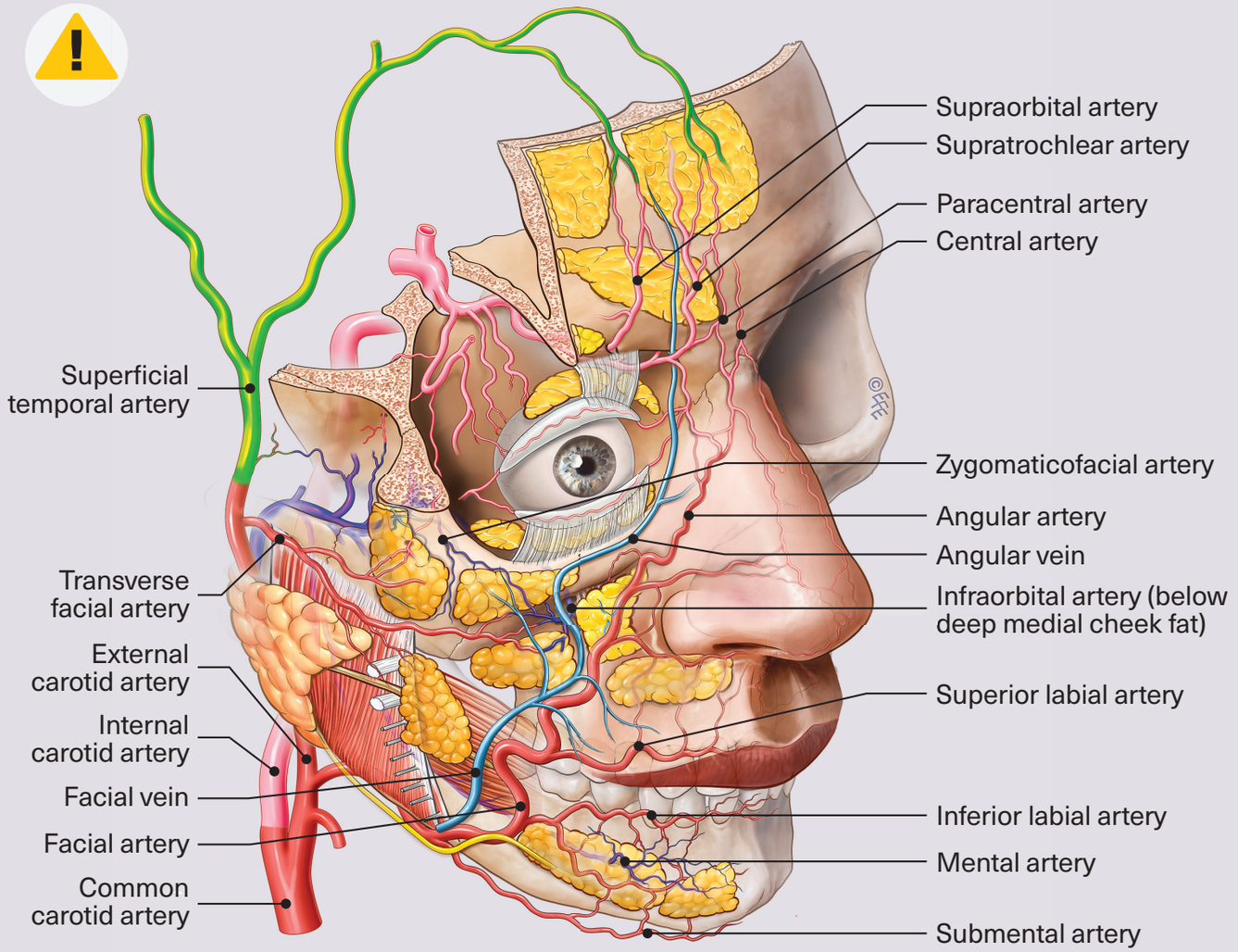
Knowledge of the location of lymph-collecting vessels in the face is critical. Because lymphatics are so fragile and compressible, they can easily be occluded, leading to lymphedema in the tissue they drain.



It is also critical to know nerve placement. The orbicularis oculi has motor innervation from the zygomatic and temporal branches of the facial nerve. The superior orbital rim above the mid-pupil is where the supraorbital and neurovascular bundles are located.

Areas of caution: full face[1,4,12,13]

Knowing the location and depth of anatomy in the area of injection is paramount for safe technique. The location, size, and origin of the major arteries may vary between individuals. With aging, changes can occur in individual vessels, including increased diameter and decreased elasticity.

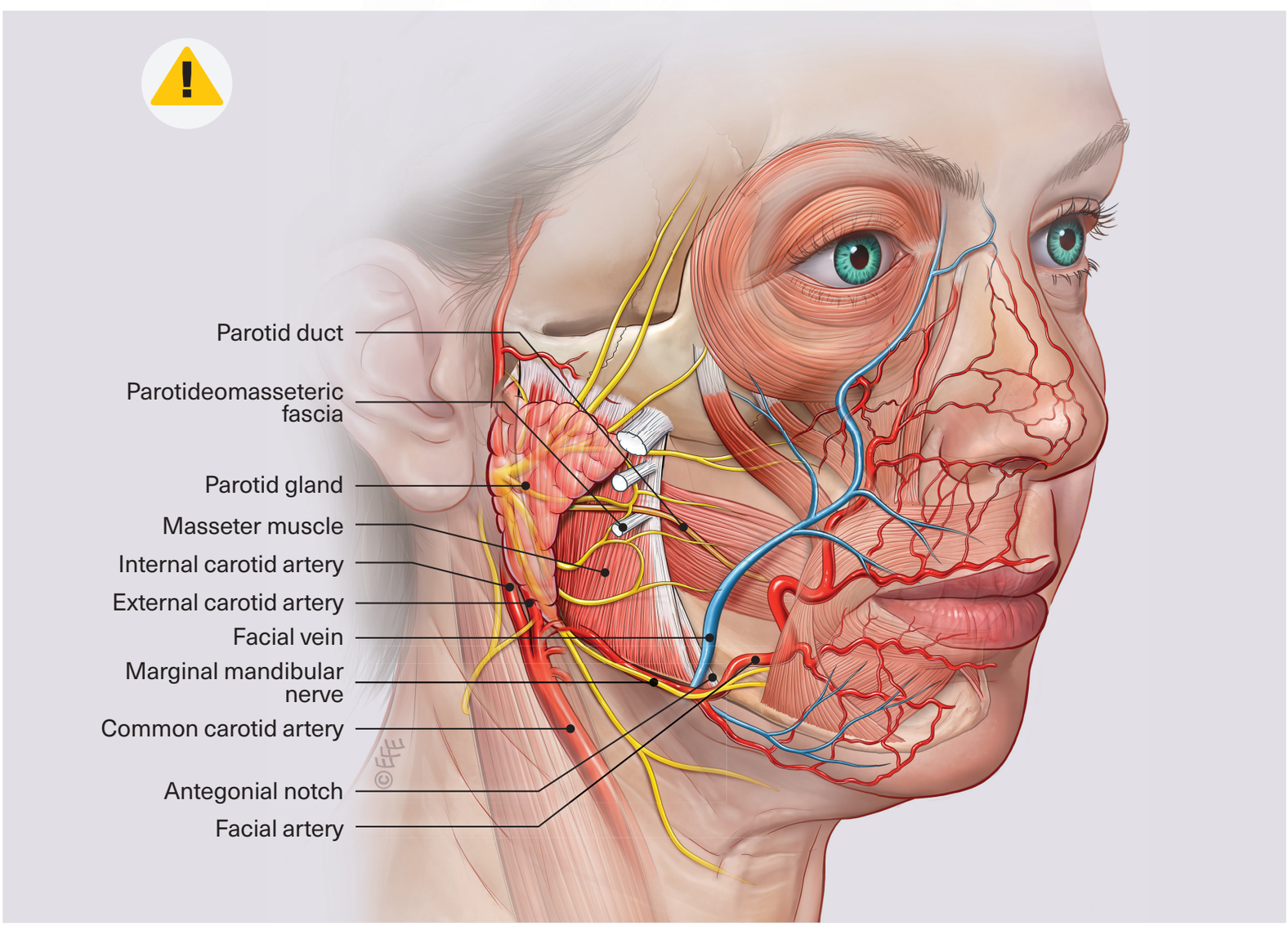


The main arteries of the face originate either from the external carotid artery (facial artery, superficial temporal artery) or from branches of the external carotid artery (transverse facial artery from superficial temporal artery, infraorbital artery from maxillary artery). The ophthalmic artery, which arises from the internal carotid artery, is a major arterial contributor to the forehead.

Review additional areas of caution on the next page ›

Areas of caution: jawline and chin[13-15]

The external carotid artery runs just posterior to the angle of the jaw before it branches as the facial artery. The facial artery is located anterior to the apex of the mandibular angle. It typically crosses the mandible deep anterior to the masseter muscle.



The accompanying veins, which are aligned parallel to each of these arteries, are also areas of caution. It is important to locate the marginal mandibular nerve, which is a branch of the facial nerve located between the masseter muscle and the parotideomasseteric fascia.

ANATOMY OVERVIEW

Visible changes over time[1]

During soft-tissue aging, loss of elasticity, deflation, and descent manifest as excess skin. Wrinkles start to appear in the lower eyelids and lateral orbital areas, along with the development of folds, drooping skin, and mimetic lines.

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