

Basic Medical Terminology II



SEMINAR 2

Revision of adjectives

Connect to make meaningful phrases



partes	• columna vertebralis	columnae vertebralis
processus	• vertebrae lumbales	vertebrarum lumbalium
sulcus	• nervus radialis	nervi radialis
ruptura	• ligamentum teres	ligamenti teretis
carcinoma	• colon descendens	coli descendentis
sanatio	• herpes simplex	herpetis simplicis
caries	• dentes permanentes	dentium permanentium
bursa	• musculus biceps brachii	musculi bicipitis brachii
inflammatio	• appendix vermiformis	appendicis vermiformis
lamina	• os ethmoidale	ossis ethmoidalis
fractura	• ossa nasalia	ossium nasalium
therapia	• morbus exacerbans	morbi exacerbantis
operatio	• trauma grave	traumatis gravis
remedium	• febris recurrens	febris recurrentis

Comparison of adjectives



- Adjectives can express different levels of quality
 - 1st level – **POSITIVE**
 - ✦ the base form of an adjective
 - ✦ *in English: good, small, easy*
 - 2nd level – **COMPARATIVE**
 - ✦ expresses a higher degree of some quality in comparison with other individuals /objects
 - ✦ *in English: better, smaller, easier*
 - 3rd level – **SUPERLATIVE**
 - ✦ expresses the highest degree of some quality in comparison with other individuals /objects
 - ✦ *in English: the best, the smallest, the easiest*

Types of comparison



- In Latin, as well as in English, there exist various ways of comparing adjectives:
 - **regular**
 - ✦ comparatives and superlatives are formed using suffixes
 - ✦ in English: small, smaller, the smallest
 - **irregular**
 - ✦ comparatives and superlatives have irregular forms
 - ✦ in English: good, better, the best
 - **periphrastic**
 - ✦ a multi-word expression having the same role as an inflectional construction, adverbial intensifiers are used
 - ✦ in English: intelligent, more intelligent, the most intelligent
 - **incomplete**
 - ✦ no positive form of adjective, only comparatives (and superlatives) exist

Regular comparison - comparative



- *Positive*

LONGUS, A, UM gen. LONG-I, LONG-AE, LONG-I
BREVIS, E gen. BREV-IS

- *Comparative*

- genitive stem + comparative suffixes **-ior** (m.+f.), **-ius** (n.)
- genitive ending for all 3 genders: **-ioris**
- declined like **3rd declension consonant stems**,
i.e. DOLOR (m. + f.) and CORPUS (n.)

LONGIOR, LONGIUS, gen. LONGIORIS
BREVIOR, BREVIUS, gen. BREVIORIS

Declining comparatives



	singular		plural	
nom.	brevior	brevius	breviores	breviora
gen.	brevioris		breviorum	
acc.	breviorem	brevius	breviores	breviora
abl.	breviore		brevioribus	

Comparative forms are declined according to paradigms:

DOLOR (M., F.) and CORPUS (N.).

Genitive ending for all 3 genders: – IORIS.

E.g.:

simplex, simplicis -> simplicior (m., f.), simplicius (n.) -> gen. sg.: **simplicioris** (m., f., n.)

latus, a, um -> latior (m., f.), latius (n.) -> gen. sg.: **latioris** (m., f., n.)

Latin and Greek declensions

Declens.		I.			II.				III.					IV.		V.
Paradigm		<i>vena</i>	<i>systole</i>	<i>diabetes</i>	<i>nervus</i>	<i>septum</i>	<i>nephros</i>	<i>colon</i>	<i>dolor</i>	<i>corpus</i>	<i>pelvis</i>	<i>dosis febris</i>	<i>rete</i>	<i>ductus</i>	<i>genu</i>	<i>facies</i>
Gender		f.	f.	m.	m.	n.	m.	n.	m. + f.	n.	m. + f.	m. + f.	n.	m.	n.	f.
S i n g u l a r	1.	-a	-e	-es	-us/-er	-um	-os	-on	?	?	-is/-es	-(s)is/ -xis/-osis	-ar/-e/ -al	-us	-u	-es
	2.	-ae	-es	-ae	-i	-i	-i	-i	-is	-is	-is	-is/-eos	-is	-us	-us	-ei
	4.	-am	-en	-am	-um	1	-on	1	-em	1	-em	-im/-in	1	-um	1	-em
	6.	-a	-e	-a	-o	-o	-o	-o	-e	-e	-e	-i	-i	-u	-u	-e
P l u r a l	1.	-ae	-ae	-ae	-i	-a	-i	-a	-es	-a	-es	-es	-ia	-us	-ua	-es
	2.	-arum	-arum	-arum	-orum	-orum	-orum	-orum	-um	-um	-ium	-ium	-ium	-uum	-uum	-erum
	4.	-as	-as	-as	-os	1	-os	1	-es	1	-es	-es	1	-us	1	-es
	6.	-is	-is	-is	-is	-is	-is	-is	-ibus	-ibus	-ibus	-ibus	-ibus	-ibus	-ibus	-ebus
		+ Adj. of 1st decl. F			+ Adj. of 2nd decl. M	+ Adj. of 2nd decl. N			+Com- parative forms M+F	+Com- parative forms N	+ Adj. of 3rd decl. M + F		+ Adj. of 3rd decl. N			

Regular comparison - superlative



- *Positive*

LONGUS, A, UM gen. LONG-I, LONG-AE, LONG-I

BREVIS, E gen. BREV-IS

- *Superlative*

- genitive stem + superlative suffixes **-issimus** (m.),
-issima (f.), **-issimum** (n.)

- declined like **1st and 2nd declension adjectives**,
i.e. **MUSCULUS** (m.), **VENA** (f.), **SEPTUM** (n.)

LONGISSIMUS, A, UM

BREVISSIMUS, A, UM

Latin and Greek declensions

Declens.		I.			II.				III.				IV.		V.	
Paradigm		<i>vena</i>	<i>systole</i>	<i>diabetes</i>	<i>nervus</i>	<i>septum</i>	<i>nephros</i>	<i>colon</i>	<i>dolor</i>	<i>corpus</i>	<i>pelvis</i>	<i>dosis febris</i>	<i>rete</i>	<i>ductus</i>	<i>genu</i>	<i>facies</i>
Gender		f.	f.	m.	m.	n.	m.	n.	m. + f.	n.	m. + f.	m. + f.	n.	m.	n.	f.
S i n g u l a r	1.	-a	-e	-es	-us/-er	-um	-os	-on	?	?	-is/-es	-(s)is/ -xis/-osis	-ar/-e/ -al	-us	-u	-es
	2.	-ae	-es	-ae	-i	-i	-i	-i	-is	-is	-is	-is/-eos	-is	-us	-us	-ei
	4.	-am	-en	-am	-um	1	-on	1	-em	1	-em	-im/-in	1	-um	1	-em
	6.	-a	-e	-a	-o	-o	-o	-o	-e	-e	-e	-i	-i	-u	-u	-e
P l u r a l	1.	-ae	-ae	-ae	-i	-a	-i	-a	-es	-a	-es	-es	-ia	-us	-ua	-es
	2.	-arum	-arum	-arum	-orum	-orum	-orum	-orum	-um	-um	-ium	-ium	-ium	-uum	-uum	-erum
	4.	-as	-as	-as	-os	1	-os	1	-es	1	-es	-es	1	-us	1	-es
	6.	-is	-is	-is	-is	-is	-is	-is	-ibus	-ibus	-ibus	-ibus	-ibus	-ibus	-ibus	-ebus
		+ Adj. of 1st decl. F			+ Adj. of 2nd decl. M	+ Adj. of 2nd decl. N			+Com- parative forms M+F	+Com- parative forms N	+ Adj. of 3rd decl. M + F		+ Adj. of 3rd decl. N			

Irregular and incomplete comparison



○ Irregular comparison

- | | | |
|-----------------|--------------|----------------|
| ○ magnus, a, um | major, majus | maximus, a, um |
| ○ parvus, a, um | minor, minus | minus, a, um |

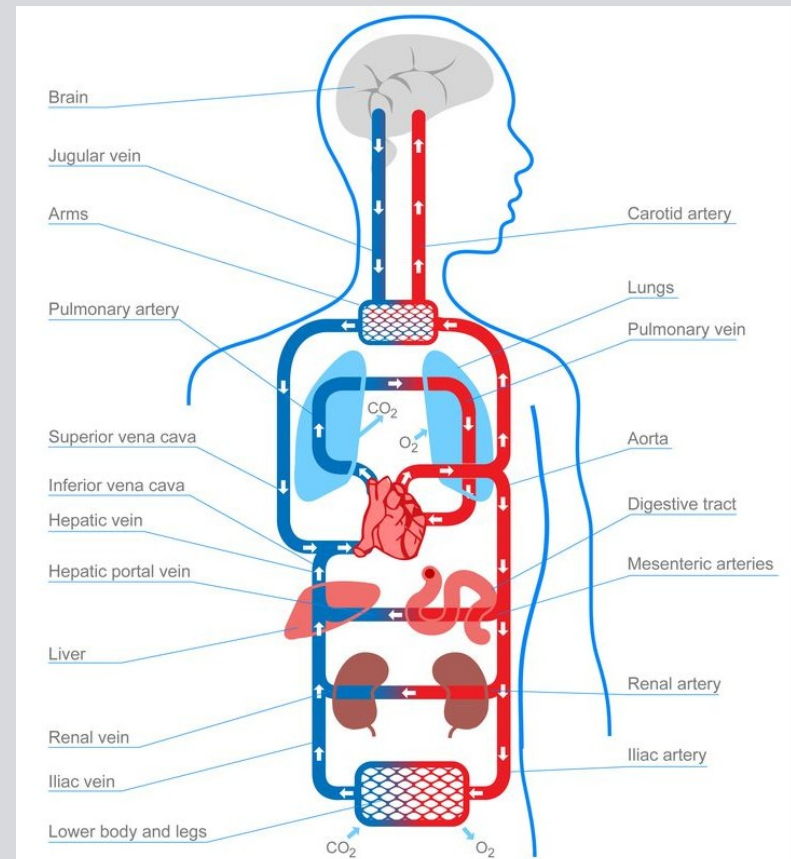
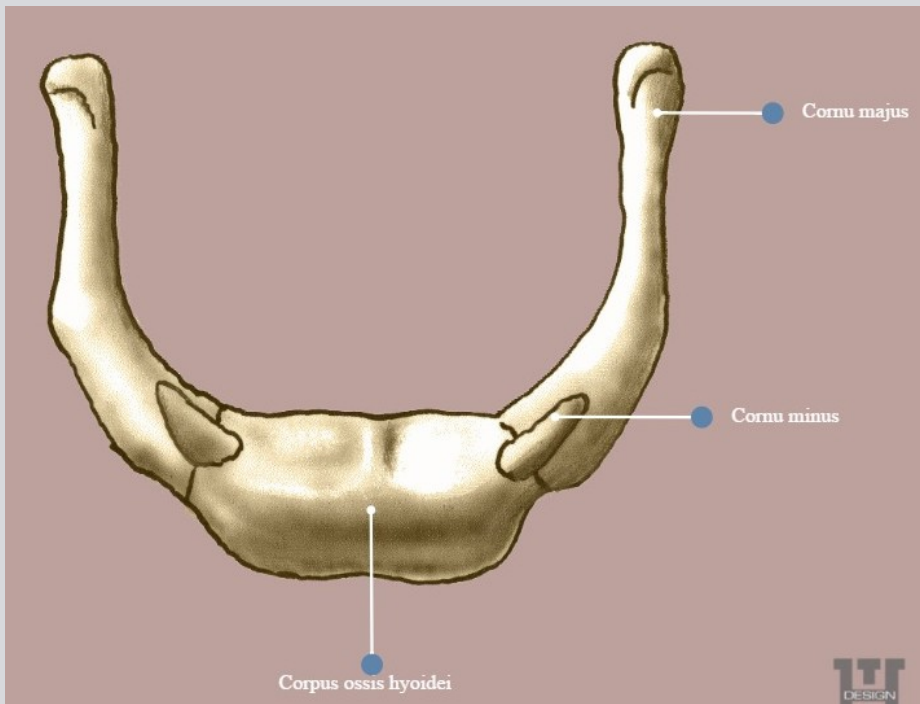
○ Incomplete comparison

- forms used to describe positions on the human body, derived from prepositions, having only comparative and superlative forms
- | | | |
|---------|----------------|---------------------|
| ○ ante | anterior, ius | |
| ○ post | posterior, ius | postremus, a, um |
| ○ supra | superior, ius | supremus, a, um |
| ○ infra | inferior, ius | infimus/imus, a, um |
| ○ intra | interior, ius | intimus, a, um |

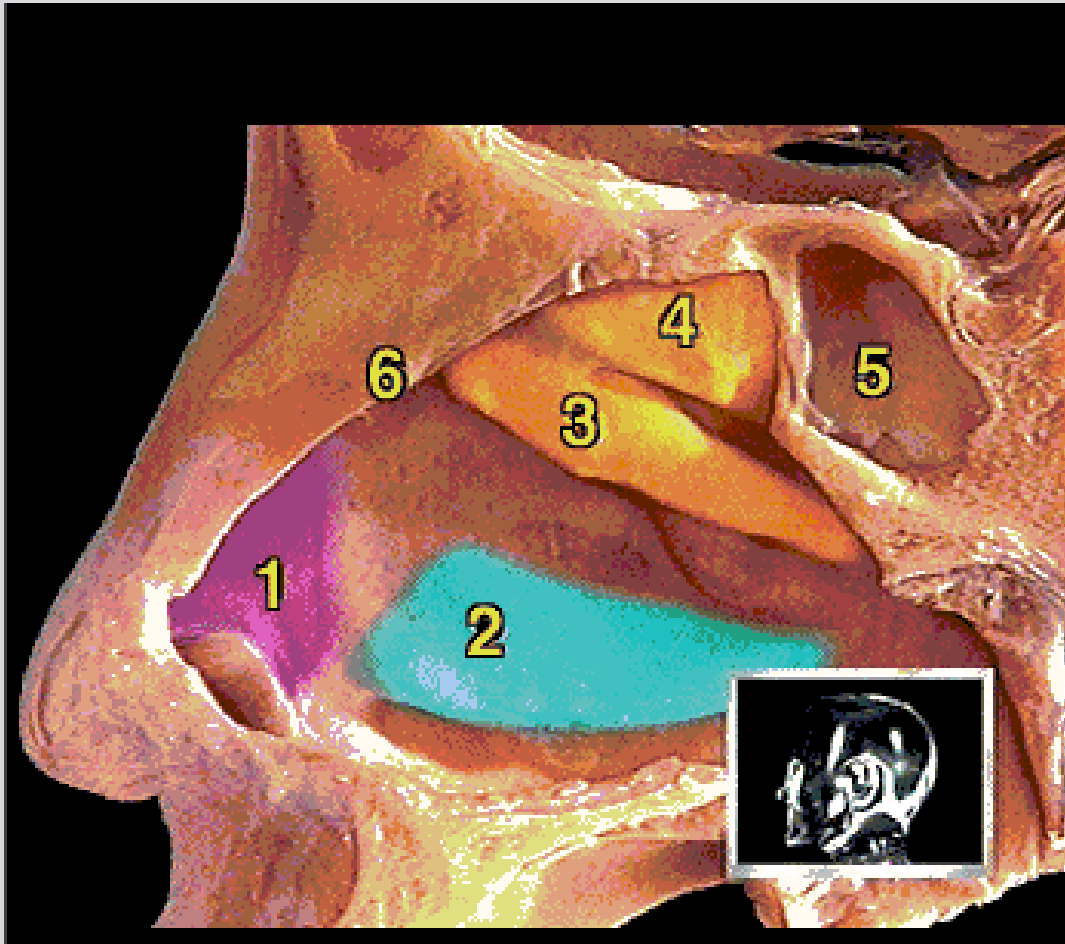
All of these forms are regularly declined according to the paradigms specified above!!!

Use of comparatives in anatomy

- In anatomical terminology, comparative forms are used to differentiate two structures of the same kind (e.g. by expressing their location):
 - *circulatio sanguinis major / minor*
 - *cornu majus / minus ossis hyoidei*
 - *vena cava superior / inferior*

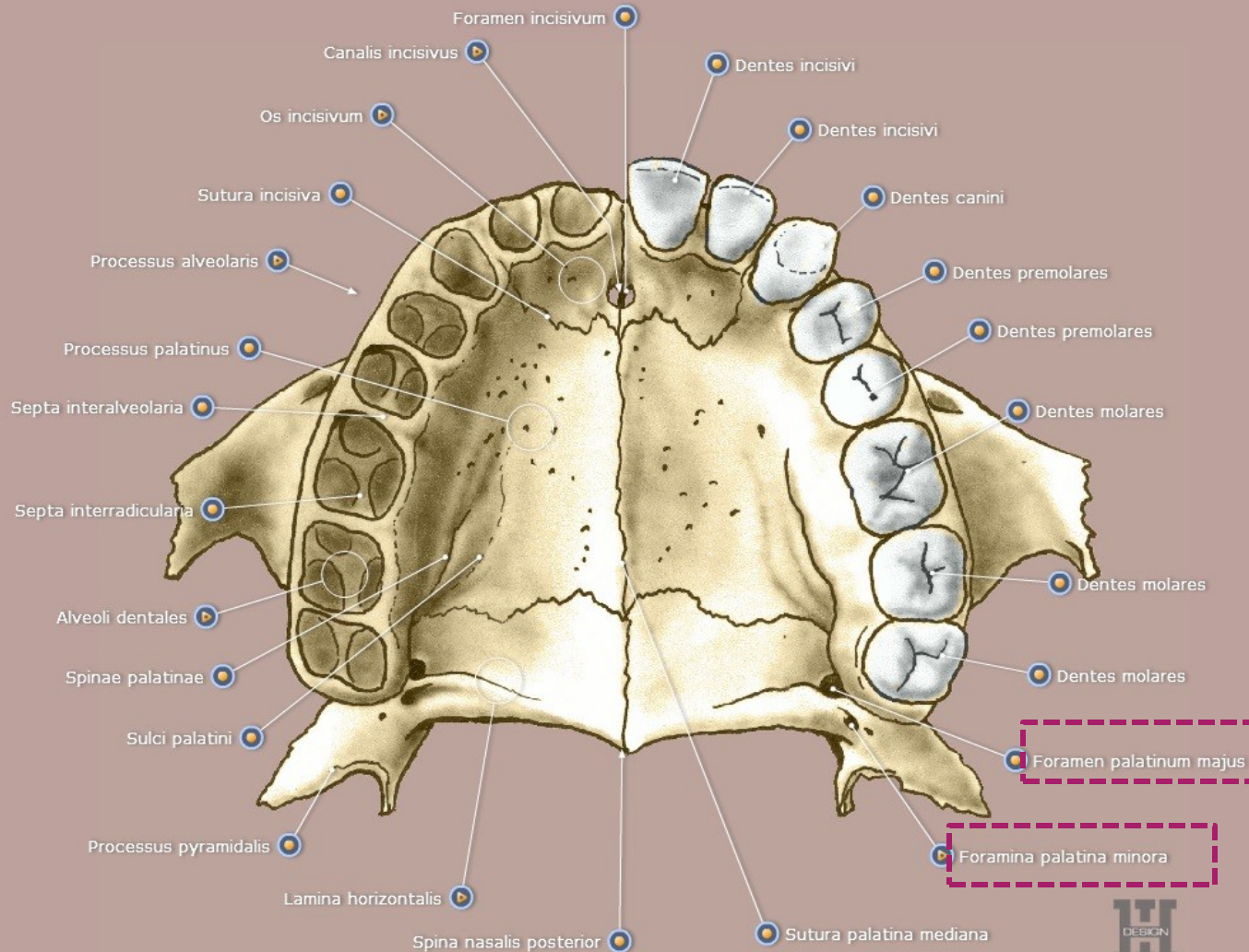


Use of comparatives in anatomy

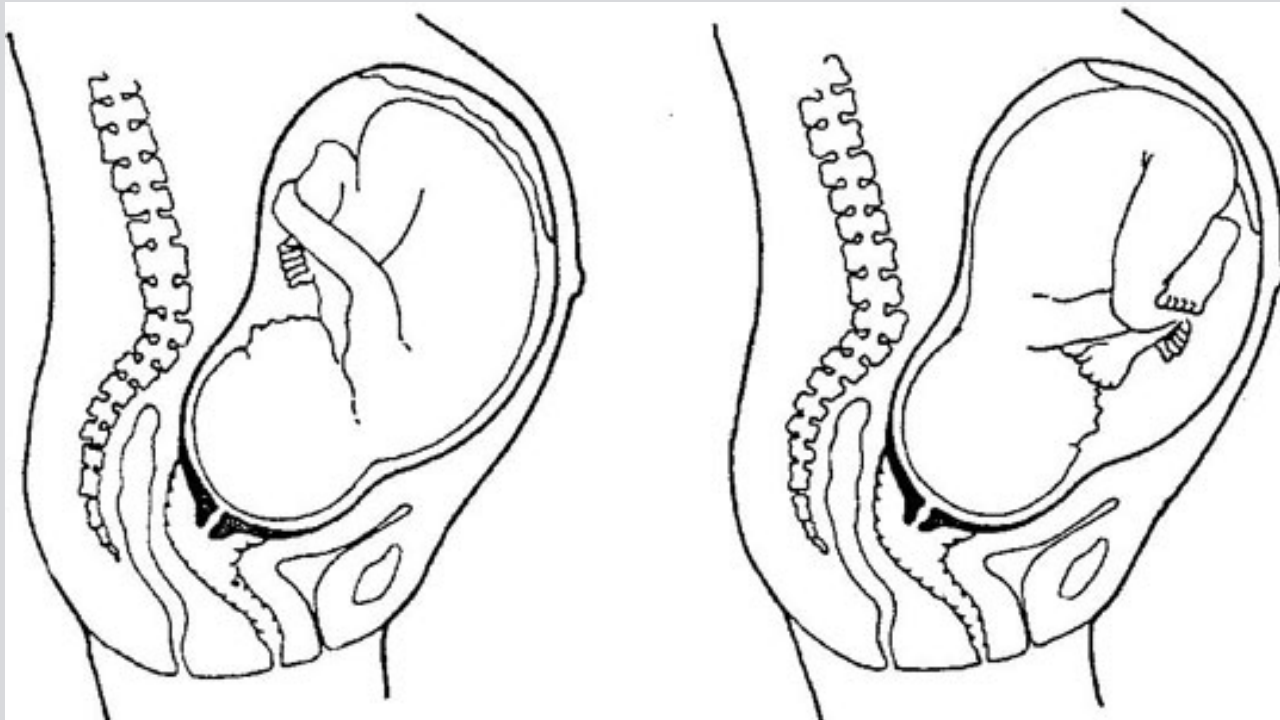


- 1 cartilago lateralis
- 2 concha nasalis *inferior*
- 3 concha nasalis media
- 4 concha nasalis *superior*
- 5 sinus sphenoidalis
- 6 septum nasi

Use of comparatives in anatomy



Use of comparatives in anatomy

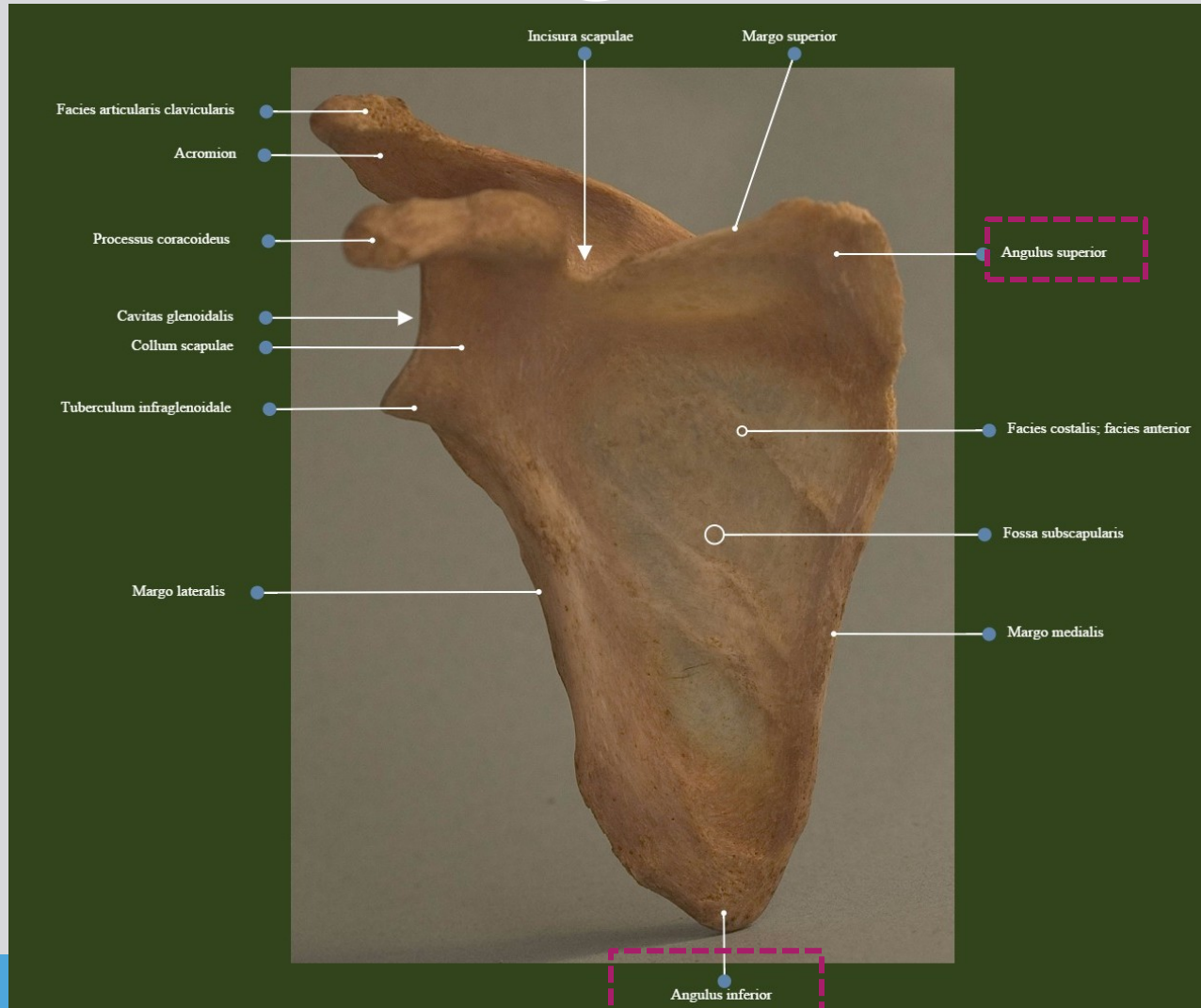


praesentatio occipitis / occipitalis

anterior

posterior

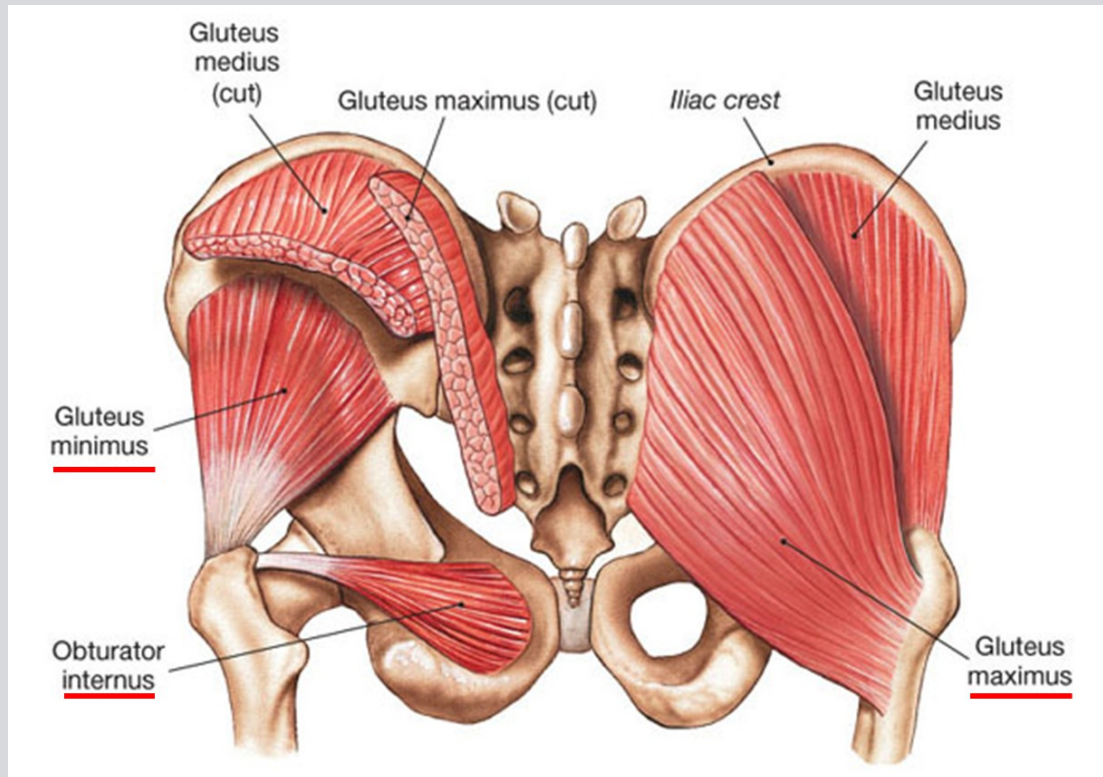
Use of comparatives in anatomy



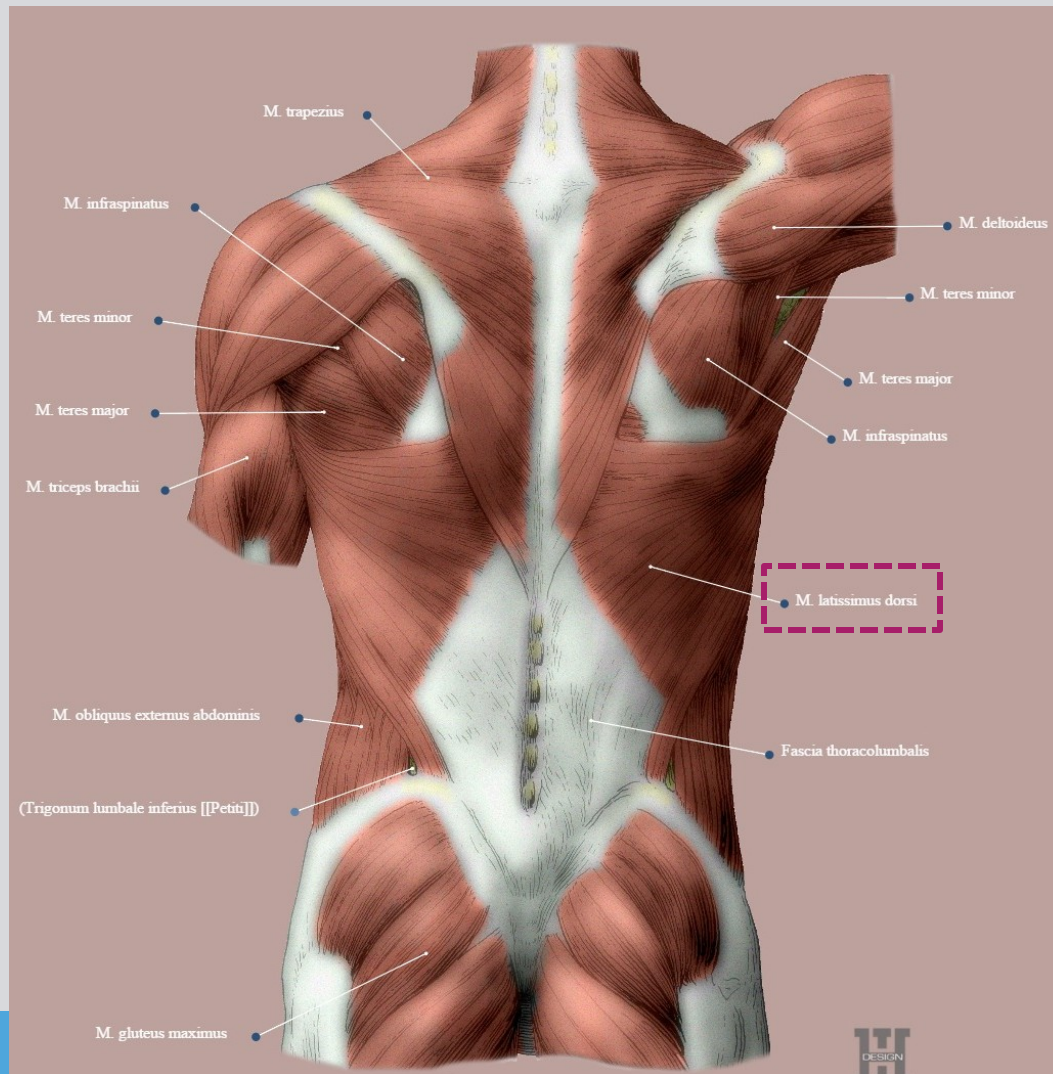
Use of superlatives in anatomy



- In anatomical terminology, superlative forms are used to express the highest degree of some quality in one of more than two structures of the same kind.



Use of superlatives in anatomy



Form comparatives and superlatives



POSITIVE	COMPARATIVE	SUPERLATIVE
parvus, a, um	minor, minus	minimus, a, um
brevis, e	brevior, ius	brevissimus, a, um
fortis, e	fortior, ius	fortissimus, a, um
acutus, a, um	acutior, ius	acutissimus, a, um
magnus, a, um	maior, maius	maximus, a, um
longus, a, um	longior, ius	longissimus, a, um
gravis, e	gravior, ius	gravissimus, a, um
profundus, a, um	profundior, ius	profundissimus, a, um
latus, a, um	latior, ius	latissimus, a, um

Fill in comparatives and superlatives in correct forms (Handout 2.2, task 3)



minimus, a, um

musculus abductor digiti minimi

minor, minus

cornu minus ossis hyoidei

superior, ius

defectus arcus dentalis superioris

intimus, a, um

musculi intercostales intimi

inferior, ius

amputatio membri inferioris

imus, a, um

arteriae lumbales imae

anterior, ius

peritoneum parietale anterius

latissimus, a, um

ruptura musculi latissimi dorsi

posterior, ius

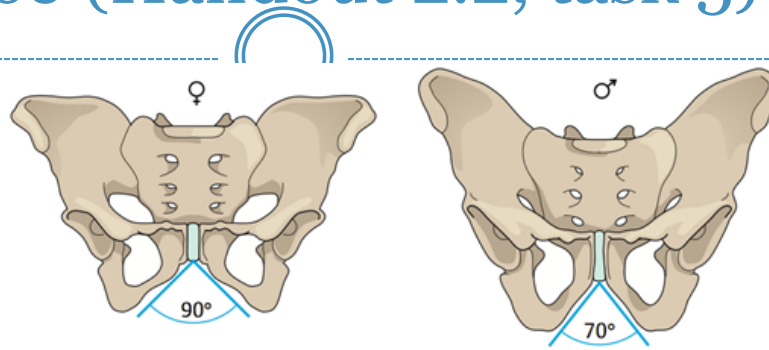
arteria temporalis profunda posterior

Create meaningful diagnoses



- pro / dosis / infantibus / maxima
 - dosis maxima pro infantibus
- oris / chronicum / superioris / ulcus / labii
 - ulcus chronicum labii superioris oris
- sepsim / propter / lateris / amputatio / membri / sinistri / inferioris
 - amputatio membri inferioris lateris sinistri propter sepsim
- gastritidis / minoris / suspicio / gradus
 - suspicio gastritidis gradus minoris
- inferioris / dextri / rami / et / ossis / fractura / superioris / pubis / lateris
 - fractura rami superioris et inferioris ossis pubis lateris dextri

Decide whether the following sentences are true or false (Handout 2.2, task 5)



1. Pelvis feminina levior est.

True

False

✓

2. Pelvis masculina latior est.

✓

3. Apertura superior pelvis femininae major est.

✓

4. Cavitas pelvis femininae angustior est.

✓

5. Os sacrum pelvis masculinae brevius est.

✓

6. Os sacrum pelvis femininae latius est.

✓

7. Foramina obturatoria pelvis femininae majora sunt.

✓

8. Acetabula feminina majora sunt.

✓

9. Coccyx feminina brevior est.

✓

10. Angulus alarum ossis ilii masculini minor est.

✓

11. Promontorium femininum minus est.

✓

12. Symphysis pubica feminina longior est.

✓

Translate (Handout 2.2, task 6)



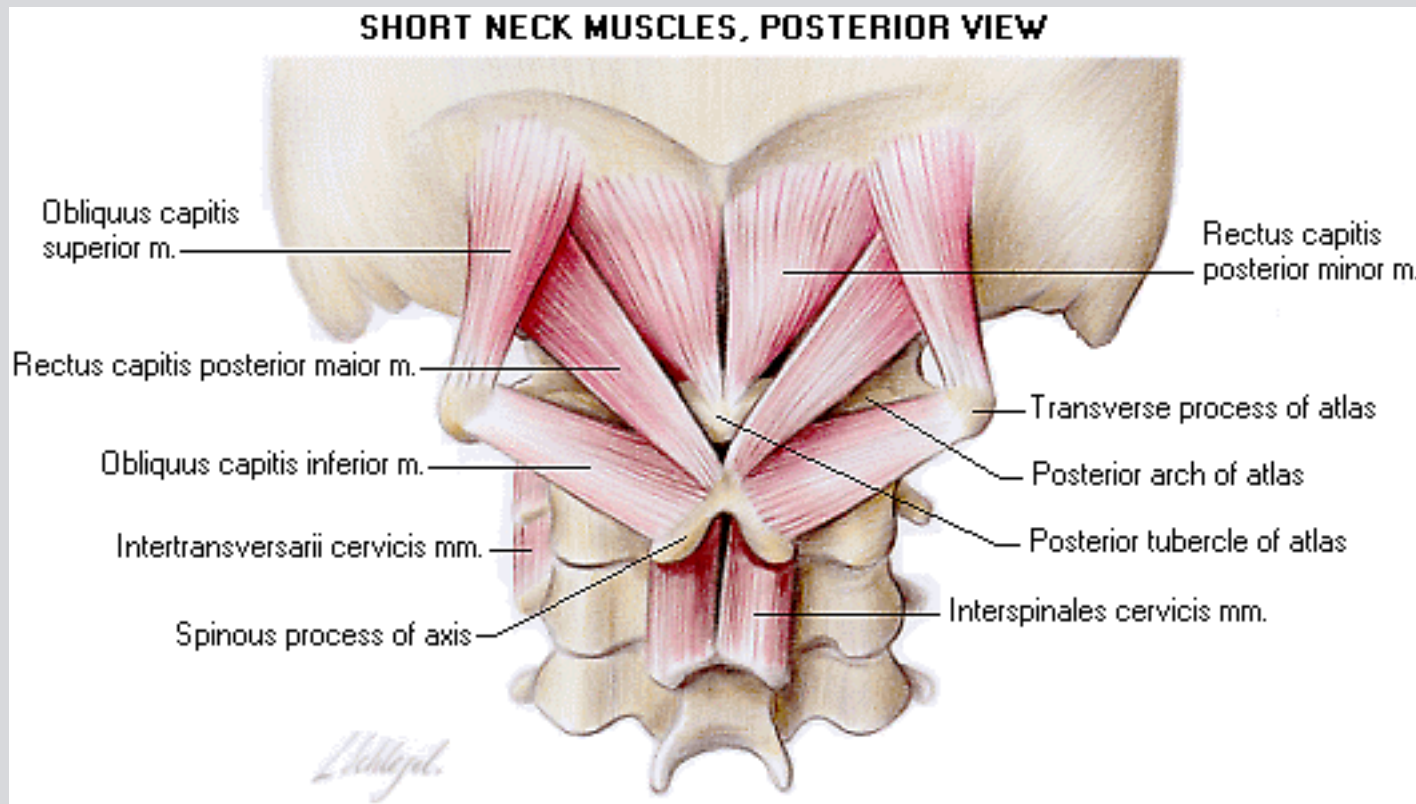
- more severe injury
 - *trauma gravius*
- bigger sublingual duct
 - *ductus sublingualis major*
- in the upper hollow vein
 - *in vena cava superiore*
- the longest muscle of the upper limb
 - *musculus longissimus membri superioris*
- lesser (= smaller) curvature of stomach
 - *curvatura gastrica (ventricularis) minor*
- posterior deep temporal artery
 - *arteria temporalis profunda posterior*

Translate (Handout 2.2, task 6)



- fracture of the middle phalanx of the smallest finger
 - *fractura phalangis mediae digiti minimi*
- the most recent infarction
 - *infarctus recentissimus*
- the innermost layer of oesophagus
 - *tunica intima oesophagi*
- amputation of the lower limb due to gangrene caused by diabetes mellitus
 - *amputatio membri inferioris propter ganraenam e diabeta mellito*

Give correct Latin anatomical terms



Introduction to word-formation



In medical terminology, the following word-formation processes are used:

1) Derivation

- a) Prefix: ante-brachium; ana-lysis
- b) Suffix: brachi-alis; nephr-itis
- c) Prefix + suffix: ante-brachi-alis; para-neph-itis

2) Composition: prim-i-para; pneum-o-thorax

3) Derivation + composition:

nas-o-lacrim-alis; haemat-ur-ia

4) Abbreviations: DM; CT; HIV, AIDS

5) Borrowings: shock; stress

6) Eponyms: Alzheimer's disease (named after Alois Alzheimer)

Basic terminology: 3 component parts of words



PREFIX	WORD ROOT	SUFFIX
	PORT	
RE	PORT	
IM	PORT	
SUP	PORT	
EX	PORT	
TRANS	PORT	
	PORT	ER
	PORT	ABLE
TRANS	PORT	ABILITY

PREFIXES



- **ORIGIN:** LATIN/GREEK prepositions
- **ROLE:** SPECIFY/RESTRICT/CHANGE/ALTER the meaning of the derived word
 - **ad-**ductor vs. **ab-**ductor
- **POSITION:** AT the BEGINNING of the word
- **MEANING:**
 - **TIME/PLACE**
 - **DEGREE**
 - **DEVIATION/NORMALITY**

SUFFIXES



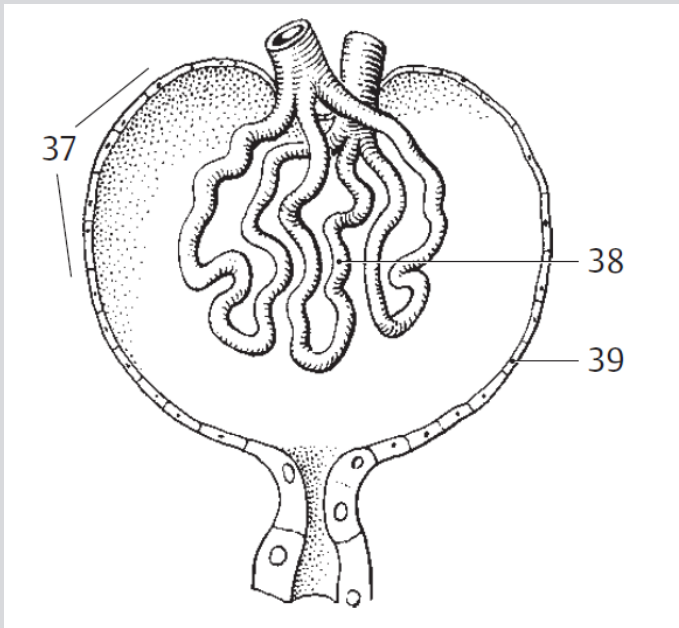
- **ROLE:** SPECIFY/RESTRICT/CHANGE/ALTER the meaning of the derived word
 - e.g.: teach vs. teacher
 - e.g. adductio vs. adductor
 - e.g. nephrosis, nephritis, nephroma
- **POSITION:** AT the END of the word
- **MEANING:**
 - **NOUN suffixes:** STATE, QUALITY, TYPE OF DISEASE,...
 - **ADJECTIVE suffixes:** RELATION, POSSIBILITY, ABILITY, SHAPE etc.

Diminutives



- Diminutives are words indicating small size:
 - e.g.: duckling, kitty, sweetie, Maggie,...
- In Latin, a diminutive is formed from a noun by the addition of a **suffix** to its **genitive stem**:
 - -(i)culus, a, um e.g. *canaliculus* (small canal)
 - -ulus, a, um e.g. *capitulum* (small head)
 - -olus, a, um e.g. *alveolus* (small cavity or pit)
 - -illus, a, um e.g. *pupilla* (pupil; dark circular aperture at the centre of the iris of the eye)
 - -ellus, a, um e.g. *cerebellum* (posterior brain mass, “small brain”)
- **Latin diminutives are always of the same gender as the nouns they are derived from!!!**

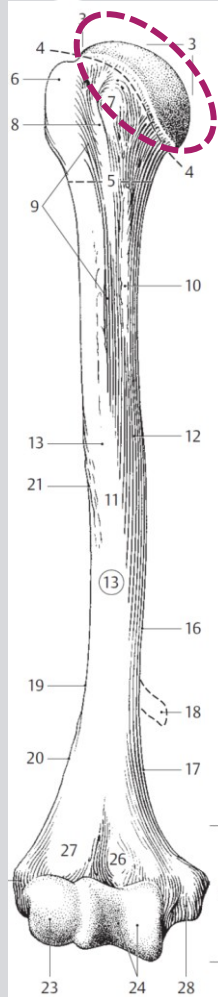
Diminutives in anatomy



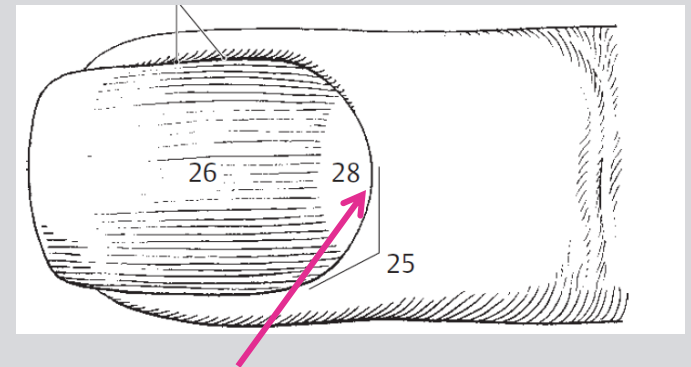
37 corpusculum renale

38 glomerulus

39 capsula glomerularis

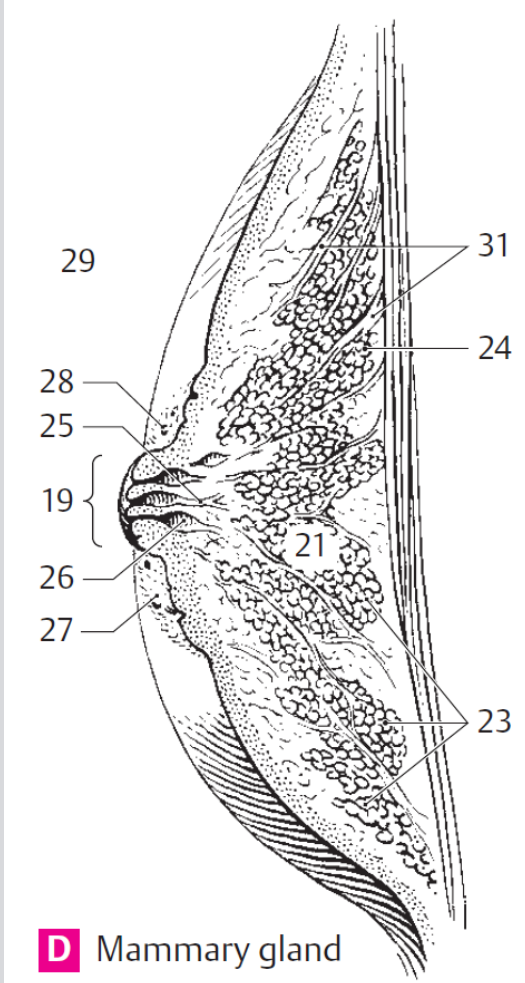


caput humeri
x
capitulum humeri



cuticula unguis

Diminutives in anatomy



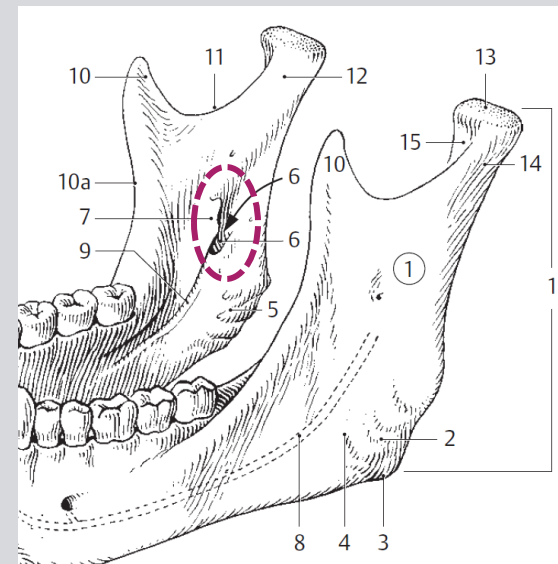
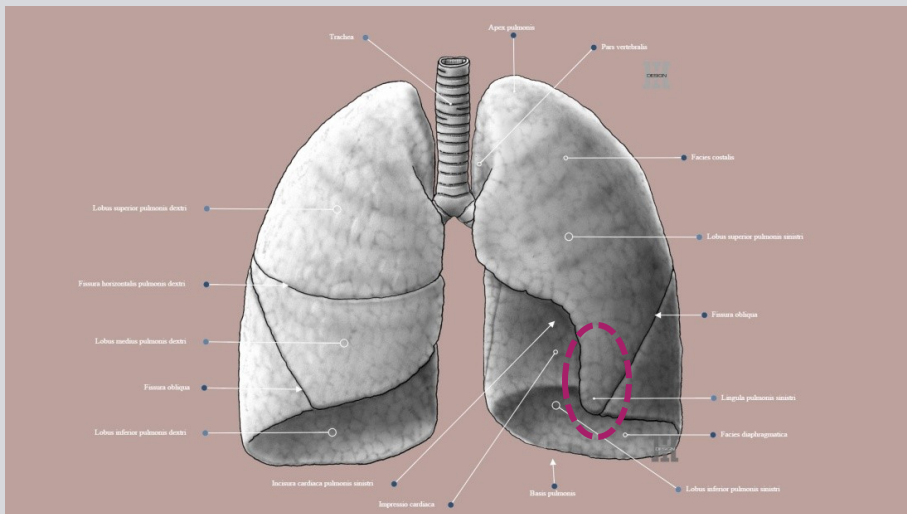
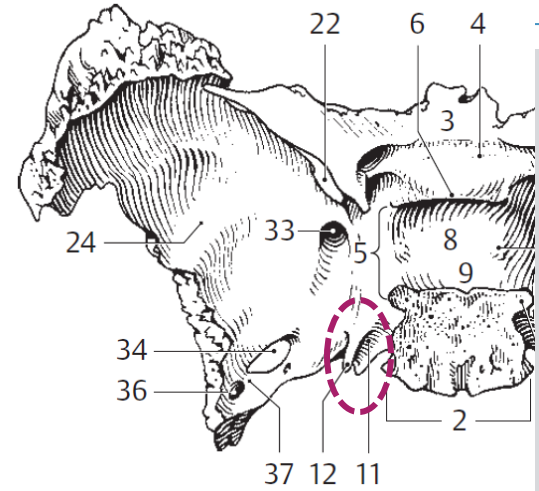
papilla mammae	19
lobi glandulae mammariae	23
lobuli glandulae mammariae	24
areola mammae	27
glandulae areolares	28
ligg. suspensoria mammaria	31

Diminutives in anatomy

lingula (< *lingua*)

= *little projection, process*

E.g.: sphenoidalis
pulmonis sinistri
mandibulae



Give nouns from which the following diminutives are derived (Handout 2.4, task 1)



capitulum *caput, itis, n.*

nodulus *nodus, i, m.*

cerebellum *cerebrum, i, n.*

lingula *lingua, ae, f.*

cuticula *cutis, is, f.*

denticulus *dens, dentis, m.*

vasculum *vas, vasis, n.*

ossiculum *os, ossis, n.*

venula *vena, ae, f.*

geniculum *genu, us, n.*

canaliculus *canalis, is, m.*

arteriola *arteria, ae, f.*

areola *area, ae, f.*

Form diminutives (Handout 2.4, task 2)



lobus *lobulus*

ductus *ductulus*

anus *anulus*

frenum *frenulum*

valva *valvula*

mus *musculus*

venter..... *ventriculus*

vena..... *venula*

fossa..... *fossula*

glans *glandula*

tuber *tuberculum*

corpus *corpusculum*

auris *auricula*

circus *circulus*



A 16-year-old boy was admitted to the hospital after being found unconscious in a snow bank at 6 a.m. on New Year's Day. He had been well until the night before admission, when he attended a party where alcohol was consumed. He was last seen at approximately 11 p.m. Approximately 2 hours later, his friends and family noticed his absence and notified police; a search was begun. At approximately 6 a.m., he

was found unconscious in a snowbank by local firefighters and police officers. The ambient temperature was -15°C (5°F), with a wind-chill factor of approximately -29°C (-20°F). He was partially undressed with his pants down and his right boot off; his limbs were buried in the snow, and a layer of ice surrounded his right foot.

Diagnosis:

Stage 3 hypothermia.

Stage 3 frostbite with diffuse distal small-vessel thrombosis and impending partial limb loss.

