

## HANDOUT 2 (SS 2017)

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### EXPRESSING POSITION IN MEDICAL TERMINOLOGY

Location of a particular anatomical structure or clinical problem is usually expressed via one (or a combination) of the following means:

#### A) prepositions

with Ablative: in, sub, a/ab

with Accusative: supra, infra, intra, extra, ad, circum, inter, per

**B) comparative** (or superlative) **forms**, if specifying the location of one of two or more similar structures

anterior, ius	x	posterior, ius	<i>foramen ethmoidale anterius / posterius</i>
superior, ius	x	inferior, ius	<i>fissura orbitalis superior / inferior</i>
imus, a, um			<i>aa. lumbales imae</i>
intimus, a, um			<i>mm. intercostales intimi</i>

#### C) adjectives

Based on body directions:

verticalis, e	x	horizontalis, e
medialis, e	x	lateralis, e
proximalis, e	x	distalis, e
caudalis, e	x	cranialis, e
palmaris, e	x	dorsalis, e
frontalis, e	x	occipitalis, e
profundus, a, um	x	superficialis, e
peripheralis, e	x	centralis, e

Based on body regions:

coronalis, e
basalis, e
ventralis, e
sagittalis, e
radialis, e
ulnaris, e
rostralis, e
pectoralis, e
apicalis, e
abdominalis, e
tibialis, e
fibularis, e
plantaris, e    etc.

**D) combined terms** with connecting vowel -o-

*arteria frontobasalis lateralis*  
*aa. centrales anterolaterales*  
*ramus frontalis posteromedialis*  
*gyrus occipitotemporalis medialis*  
*ductus paramesonephrici*                      etc.

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### E) prefixes derived from prepositions

(anatomical nomenclature mostly makes use of Latin, while clinical medicine uses more Greek)

\* has more meanings!

LATIN	Example	GREEK equivalent
<b>*ad-</b> (ac-, af-)	<i>mm. adductores; vasa afferentia; ductus pancreaticus accessorius</i>	<b>par(a)-</b> <i>glandula parathyroidea; plica paraduodenalis; parametrium</i>
<b>ab-</b>	<i>m. abductor pollicis longus</i>	<b>apo-</b> <i>aponeurosis palmaris</i>
<b>*ante-</b> <b>pr(a)e-</b>	<i>antebrachium</i> <i>arteria pr(a)epancreatica; vena pr(a)epylorica</i>	<b>pro-</b> <i>prostata; promontorium ossis sacri</i>
<b>circum-</b>	<i>gll. circumanales; circumferentia articularis radii</i>	<b>peri-</b> <i>pericardium; periosteum</i>
<b>extra-</b>	<i>graviditas extrauterina; spatium extraperitoneale</i>	<b>exo- (ecto-)</b> <i>pars exocrina pancreatis</i>
<b>*in-</b> (im-, il-, ir-)	<i>incisura scapulae; impressio cardiac; infundibulum ethmoidale</i>	<b>en- (em-)</b> <i>empyema; encephalon</i>
<b>inter-</b>	<i>septum interventriculare; tuberculum intervenosum</i>	<b>*dia-</b> <i>diaphragma thoraco-abdominale; diaphysis</i>
<b>intra-</b>	<i>synchondroses intraoccipitales; lig. sternocostale intraarticulare</i>	<b>endo-</b> <i>saccus endolymphaticus; endothelium</i>
<b>ob- (oc-, op-)</b>	<i>m. opponens pollicis; occiput</i>	<b>*ant(i)-</b> <i>ant(i)helix</i>
<b>retro-</b>	<i>spatium retropubicum; recessus retrocaecalis</i>	<b>meta-</b> <i>aa. metacarpales</i>
<b>sub-</b> <b>infra-</b>	<i>injectio subcutanea; fossa subscapularis</i> <i>foramen infraorbitale; cavitas infraglottica</i>	<b>*hypo-</b> <i>plexus hypogastricus; nervus hypoglossus</i>
<b>super-</b>	<i>spatium perinei superficiale</i>	<b>epi-</b> <i>epithelium; epimysium; epiglottis</i>
<b>supra-</b>	<i>ossa suprasternalia; crista supramastoidea</i>	∅
<b>trans-</b>	<i>planum transpyloricum</i>	∅
∅		<b>mes(o)-</b> <i>mesoderma; mesocortex; mesocolon</i>

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### EXERCISES

#### Task 1: Connect the selected nouns with the adjective

pars – ostium – regiones – aorta – ramus + abdominalis, e

.....  
.....

caput – rete – cavitas – capsula – systema + articularis, e

.....  
.....

segmentum – nucleus – substantia – bronchus + basalis, e

.....  
.....

canalis – venae – foramina – nuclei + sacralis, e

.....  
.....

ganglia – septum – vertebra – regio + cervicalis, e

.....  
.....

#### Task 2: Add the correct form of adjective and find opposite

arteria (dorsalis, e) . . . . .

extremitates (proximalis, e) . . . . .

combustiones (superficialis, e) . . . . .

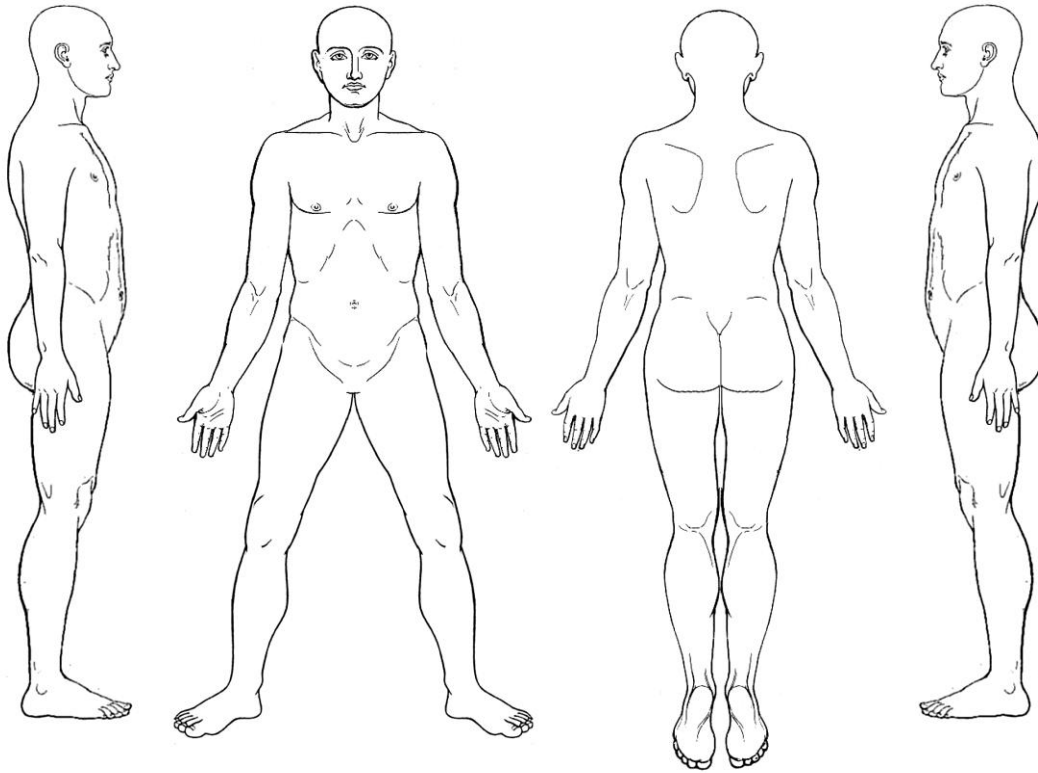
vas (afferens, ntis) . . . . .

angulus (medialis, e) . . . . .

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**Task 3:** Give basic directional terms and mark them on the pictures



**Task 4:** Are the following sentences true or false?

1. In anatomical position the palmar surface is in <i>posterior</i> position.	<i>true ?</i>	<i>false?</i>
2. The sternum is <i>anterior</i> to the heart.		
3. The clavicles are <i>mediales</i> to the sternum.		
4. The elbow is <i>proximalis</i> to the wrist.		
5. The aorta is <i>ventralis</i> to the spinal column.		
6. The skin is <i>profundus</i> to the muscles.		
7. The blood drawn from a fingertip is <i>peripheralis</i> .		

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### **Task 5: Complete sentences**

Several prefixes modify position or direction when used in a term. **Abductio** is used to describe movement .....from the body, and **adductio** describes movement.....the body. **Circumductio** is a movement that is .....Inversio refers to turning in, and **eversio** means to turn.....**Subcutaneus** pertains to .....skin. **Epidermalis** refers to something .....the skin, whereas **transdermalis** pertains to .....the skin. **Intradermalis** pertains to .....the skin. That which is within a cell is .....cellularis. **Extracellularis** pertains to .....a cell. **Inter-**, a prefix meaning.....is used in the term describing that which is between the cells: .....cellularis. **Infra-**, a prefix meaning .....is used to indicate a position below the part to which it is joined. For example, .....umbilicalis refers to a position below or under the umbilicus (navel).

### **Task 6: Analyze the meaning of the terms**

<i>injectio</i>	intravenosa	.....
	intraarterialis	.....
	intramuscularis	.....
	subcutanea	.....
<i>abscessus</i>	intracranialis	.....
	retrocaecalis	.....
	extraduralis	.....
	paraurethralis	.....
	perirenalis	.....
<i>glandula</i>	sublingualis	.....
	submandibularis	.....
	hypogastrica	.....
	parotidea	.....
	suprarenalis	.....

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### **Task 7: Translate the authentic medical records, put the full form of abbreviations**

a) fr. partis distalis radii l.dx. intraarticularis comminutiva .....

.....

b) susp. fracturae ossis scaphoidei l.sin. ....

.....

c) fractura diaphyseos femoris l. utr. pathologica .....

.....

d) st. p. fracturam costae II l.sin. in anamnesi .....

.....

e) infractio rami super. ossis pubis l.dx. s.d. suspecta .....

.....

f) fr. spiral. marginis poster. tibiae l.dx. invet. ....

.....

g) fr. fibulae lat. dx. cum disloc. ad longitudinem .....

.....

h) status post OS humeri l. sin. propter fracturam supracondylicam .....

.....

i) fr. ossis navicularis pedis l. sin. luxans .....

.....

j) status post fixationem ext. tibiae l. sin. propter fr. apert. ....

.....

k) fr. articulationis talocruralis l.sin. commin. ....

.....

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### Vocabulary

#### NOUNS

acetabulum, i, n.	hip joint socket
aponeurosis, is, f.	a sheetlike tendinous expansion
articulatio, onis, f.	joint
axis, is, m.	a line through the centre of body
caries, ei, f.	dental decay
cementum, i, n.	bonelike connective tissue covering the roots of teeth
condylus, i, m.	a rounded projection on a bone for articulation
contractio, onis, f.	drawing together
corona, ae, f.	an encircling structure resembling a crown ( <i>e.g. c. dentis</i> )
dentinum, i, n.	the chief substance of teeth covered with enamel; dentin
distractio, onis, f.	separation of
enamelum, i, n.	the hard, mineralized surface of teeth; enamel
epicondylus, i, m.	an eminence on a bone above its condyle
fixatio, onis, f.	fastening in a fixed position
fragmentum, i, n.	fragment ( <i>e.g. of bone</i> )
helix, icis, f.	a spiral; the free margin of auricle
incisor, is, m.	front tooth
index, icis, m.	2 <sup>nd</sup> finger
infractio, onis, f.	incomplete fracture ( <i>x infarctus us, m. !!</i> )
ischemia, ae, f.	insufficient supply of blood into an organ
luxatio, onis, f.	disarticulation of a joint
malaria, ae, f.	malaria
massa, ae, f.	lump; aggregation of coherent material

nucleus, i, m.	( <i>here</i> ) a mass of gray matter
osteosynthesis, is, f.	fixation of bone fragments with plates, wires, etc.
promontorium, i, n.	a projecting process or eminence
pulpa, ae, f.	soft, juicy tissue; pulp ( <i>e.g. p. dentis; p. lienis</i> )
radix, icis, f.	root
recessus, us, m.	a small empty space or cavity
repositio, onis, f.	returning into proper position
stabilisatio, onis, f.	putting into a stable position
*lateris utriusque (l.utr.)	= on both sides
*verisimiliter/veri similis (v. s.)	= probably

#### ADJECTIVES

articularis, e	related to/located in a joint
dislocatus, a, um	dislocated ( <i>e.g. fracture</i> ) ( <i>x dislocatio, onis, f. !!</i> )
fluctuans, ntis	floating; free ( <i>with ribs</i> )
= fluitans, ntis	
incipiens, ntis	initial; beginning
inveteratus, a, um	old; not properly healed; chronic
ischemicus, a, um	related to ischemia
lateralis, e	located on sides
( <i>x latus, eris, n. !!</i> )	
metacarpalis, e	metacarpal ( <i>e.g. bones</i> )
metatarsalis, e	metatarsal
penetrans, ntis	penetrating
pr(a)emolaris, e	located before molar (tooth); premolar
proximus, a, um	close to
serratus, a, um	having saw-toothed edges ( <i>see m. serratus</i> )