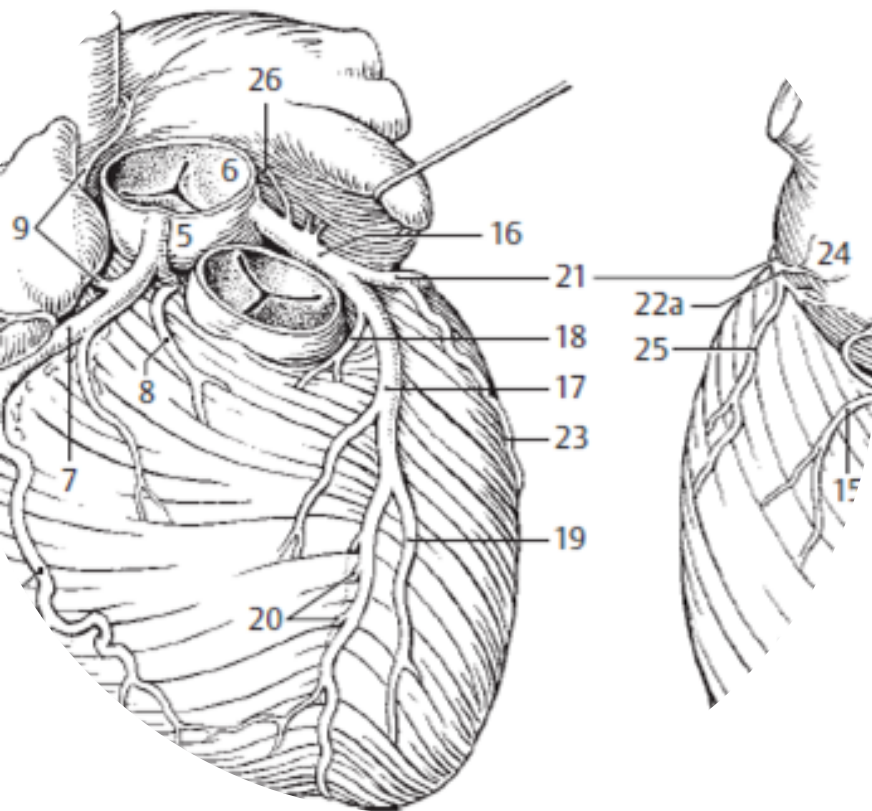


- **See the course requirements in IS, but basically:**
 - ACTIVE attendance
 - regular preparation before each session
 - passing the credit test

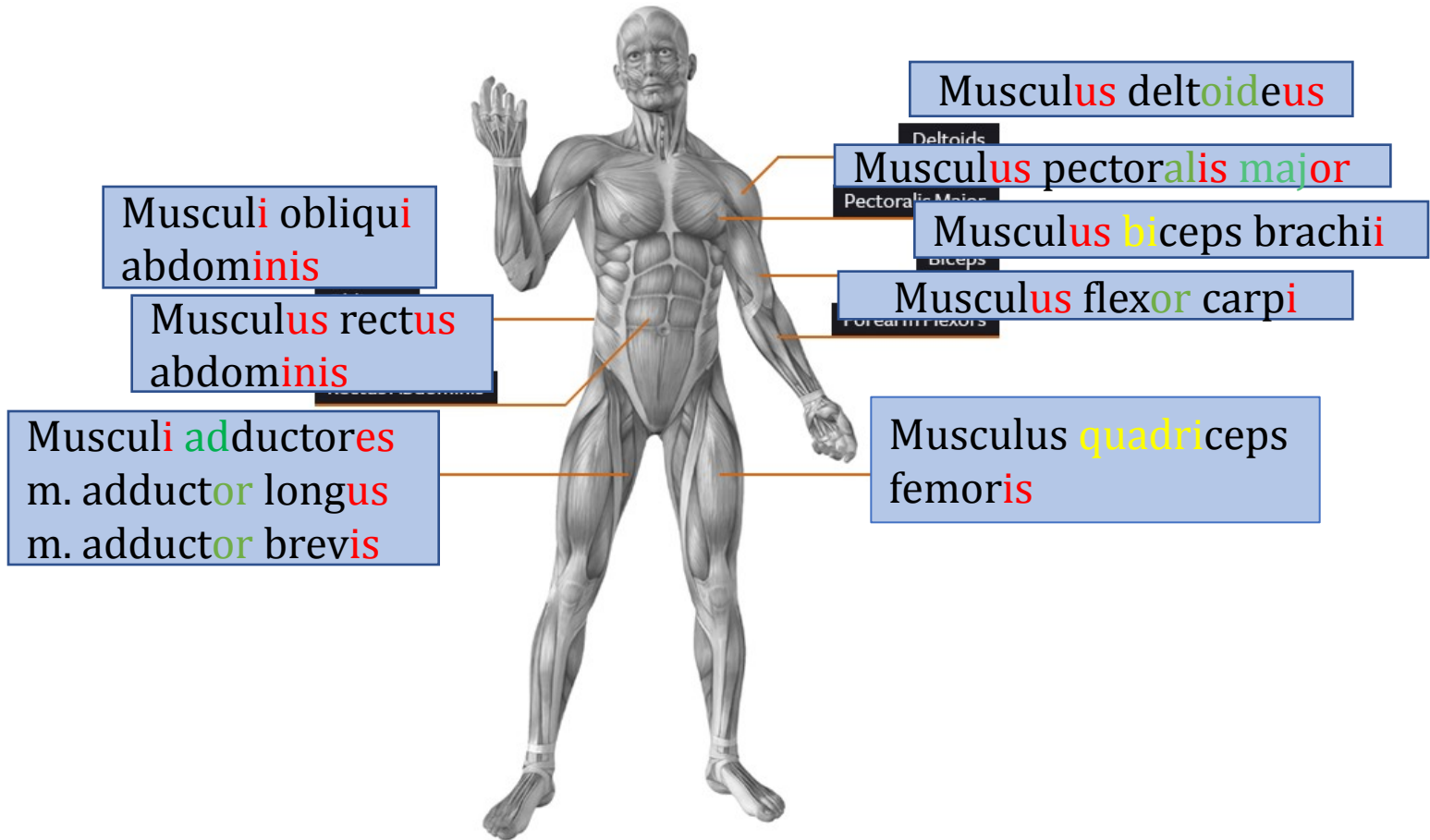
- **universal, precise and flexible** system of terms denoting:
 - anatomical structures
 - medicaments, instructions for pharmacists
 - medical documentation (diagnoses, procedures)

- **Application:**
 - clinical diagnoses
 - dissection protocols
 - medical prescriptions
 - medical documentation --- communication between doctors from different environments/countries/fields of study

- First worldwide official standard terminology appeared 1895 (*Basiliensia Nomina Anatomica*) since then it was periodically updated and changed to implement new findings and/or understanding of the anatomical structures
- Current terminology is approved by FCAT (Federative Committee on Anatomical Terminology) and published in 1998 as TERMINOLOGIA ANATOMICA
(cf. <http://www.unifr.ch>)



- 5 bulbus aortae
- 6 arteria coronaria dextra
- rami atrioventriculares
- 8 ramus coni arteriosi
- 9 ramus nodi sinuatrialis
- 10 ramia atriales
- 11 ramus marginalis dexter
- 12 ramus
- 13 ramus interventricularis posterior
- 14 rami interventriculares septales
- 15 ramus nodi atrioventricularis
- 16 ramus posterolateralis dexter
- 17 arteria coronaria sinistra
- 18 ramus
- 19 ramus con arteriosi
- 20 ramus lateralis
- 21 rami interventriculares septales
- 22 ramus circumflexus
- 23 ramus atrialis anastomoticus

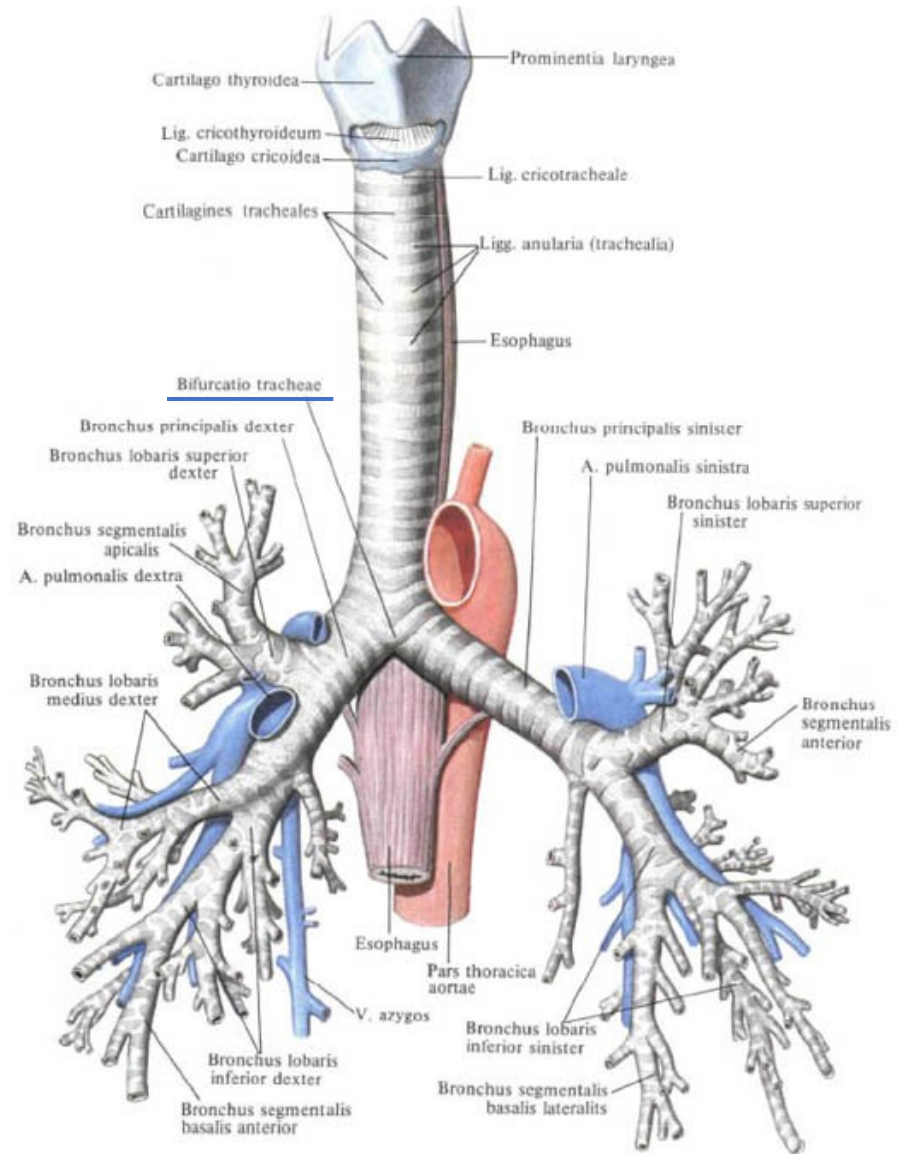
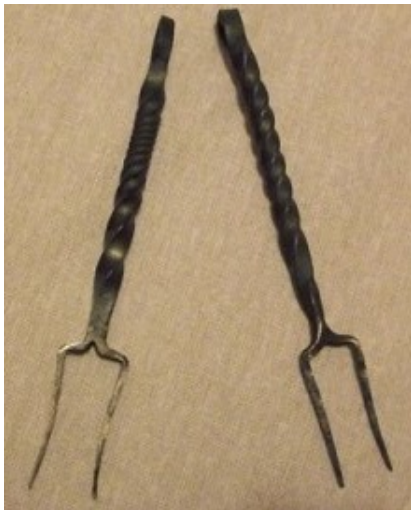


- Many medical terms are based on metaphors and similes, i.e. they are formed from words of non-medical origin
- E.g. *bifurcatio* = bifurcation

1. a division into two branches.
2. the point at which division into two branches occurs.

furca = a two-pronged fork

bifurcatio tracheae



- **Non-definite** set of terms that names diseases, health conditions or causes of death
- First authoritative list of diseases and causes of death 1868 (*Nomenclature of diseases*), 1893 Bertillon's classification of diseases
- Current terminology ICD-10 (*International Classification of Diseases*) is approved by WHO and published every \pm 10 years (www.who.int/classifications/icd/en/)
- Widely used in medical documentation e.g. medical reports, surgical and hospital reports, pathological reports (central Europe, Russia and former republics of USSR, partially also in Western Europe - Germany, Austria)

Medical records



Rehabilitační oddělení
B Rehabilitace odd 186A (B-RHO-A)
Fyzioterapie 625 00 Brno rázičko oddělení
IČP: 72100054 ①

RHO-1A
Fakultní nemocnice Brno
rehabilitační oddělení
Jihlavská 20, 625 00 Brno
⑤

Č. chor.

Zákl. dg: M160 Coxarthrosis l. sin.

Dg. souhrn:

St.p. implantationem endoprotheseos totalis coxae l.sin. propter
coxarthrosim 13.10.2010 Z 96 6

Coxarthrtosis l.dx. I st. M 16 0

Morbus hypertonicus in anamnesi h.t.comp. I 10

Léčebný a diagnostický plán:

LTV - 2 x denně - cvičební jednotka pro pac. po TEP kyčle, kondi
cvičení dle tolerance pac., dechová a cévní gymnastika, nácvik ch
po rovině a po schodech o 2 PB bez zatěžování operované LDK s její
příkládáním.

Goniometrie kyčle 1x týdně. MT na jizvu - po vytažení
stehů denně - od 1.11.2010

Nácvik samostatnosti a soběstačnosti.

PIR - protažení flexorů kyčlí i kolenních kloubů, resp.
protážení zkrácených svalových skupin a posílení oslabených
svalových skupin.

Poučení pacienta o péči o jizvu, instruktáž pacienta.

20.10.2010

Po dobu ošetřování ponechte pacientovi

Ústavní pohotovostní chir. služba NsP Rakovník

Dukelských hrdinů 200, 269 01 Rakovník

tel.: +420 313 525 432

e-mail: chirurgie@nemorako.cz

Příjmení a jméno:

Bydliště pacienta:

NÁLEZ ze dne 05.06.04 11:34

Zapsal: Šimek Lubor, MUDr. 05.06.04 12:01

Diagnózy:

S610 Vulnus scissum digiti II. manus l.ain.

W268 Kontakt s nožem, mečem nebo dýkou - Jiné určené místa

před 8mi hod si seřizl dorzolater- stranu II. prstu L ruky nad PIP
loubem - lalok, periferie +

tetanus snad více než 5 let

dop.: vulnus scissum digiti II. man. l.ain. inveter.

ch.: V LA 14 mesokainem, revize, revitalizace okrajů, sutura jedn. a
samoadapt. stehy, krytí, obvaz

alteana 0,5ml i.m.

dop.: fyz. šetření, elevace HK, nemáčet, analgetika při bolesti,

kontrola na cHA pozitivní 7.6.04 dopol. při zhoršení kdykoliv dříve

Zpracoval(a):

Šimek Lubor, MUDr.



WORD COMPOUNDING

root

suffix

prefix

combining element

card-i-a

card-i-acus

card-i-alis

peri-**card-ium**

endo-**card-ium**

myo-**card-ium**

card-itis

peri-**card-itis**

card-i-o-logia

card-i-o-graphia

card-i-o-my-o-pathia



Medical prescriptions

VZOR

INSCRIPTIO

Kód pojišťovny	RECEPT	poř. č.
Udaje platné pro celý recept (výpis, pohotovost, repetatur s počtem opakování, nutná a neodkladná péče, atd.)		

PERSONALIA AEGROTI

Příjmení a jméno		
Číslo pojištěnce		f.
Bydliště (adresa)		

INVOCATIO

Popl.	Diagnóza ¹⁾	Sk.	Kód	Započ.dopl.	Úhrada
-------	------------------------	-----	-----	-------------	--------

ORDINATIO

- a) PRAESCRIPTIO (COMPOSITIO)
- b) SUBSCRIPTIO
- c) SIGNATURA

Rp.

Kalii jodidi	1,0
Éphedrini hydrochloridi	0,2
Thymi sirupi comp.	20,0
Aquae purif.	ad 100,0
M. f. liquid.	
D. ad lag.	
D. S. 3x denně 1 lžiči	

MAGISTRALITER

Popl.	Diagnóza ¹⁾	Sk.	Kód	Započ.dopl.	Úhrada
-------	------------------------	-----	-----	-------------	--------

Rp.

Frontin 0,5 mg
Exp. orig. No. III (tres)
D. S. 1 tbl. ráno, 1 tbl. večer

SPECIALITAS

DATUM

Dne:

SIGILLUM ET NOMEN MEDICI

razítko poskytovatele,
jmenovka, podpis a telefon lékaře

Připravil:	Vydal:
------------	--------

¹⁾ Vyplňuje se povinně v případě zvýšené úhrady.

Dissection protocols

tok mozku, podchlazení
Podchlazení organismu E 901,

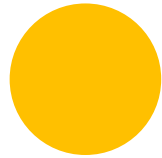
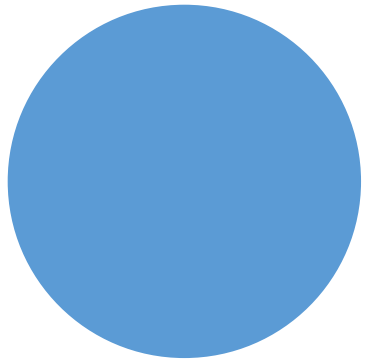
ELATIO.
holaemia :
holuria :
res mortis lucide rubri.

ma cerebri grave, conus occipitalis et t
uot subpleurales. Venostasis acuta pulmo
ersae pulmonum. Sanguis ventriculorum co
stasis acuta organorum abdominalium.

ma cerebri. Congelatio.

erosclerosis aortae I. gradus et arteria
us. Bronchitis catarrhalis chronica.
cularum pulmonum. Hypertrophia trabe
tri cordis /cor pulmonale/. Haematom
remitarum inferiorum et superiorum.
dorsi manus. usriusque.

- apply relevant Latin anatomical terms correctly and with understanding;
- recognize and explain grammatical concepts and categories relevant to the acquisition of Greek-Latin medical terminology;
- recognize the semantic structure of selected anatomical and clinical one-word terms;
- explain syntactic structure of complex terms;
- derive adjectives from nouns and vice-versa using common suffixes;
- form simple compound words denoting inflammatory and non-inflammatory diseases, as well as the basic types of tumours (-itis, -osis, -oma)
- translate anatomical terms and simple clinical diagnoses (with focus put on fractures and basic types of injuries, i.e. traumatology).



Latin pronunciation



- cancer, medicamentum, lingua
- thorax, pulsus, contusio
- corpus, exitus, functio
- hemispherium, angulus, fractura
- intestinum, aqua, pharmacon
- oedema, musculus, defectus
- medicus, operatio, infarctus
- homo, bronchus, duodenum
- angina, haemorrhagia, spasmus
- encephalon, bacterium, acne
- migraena, pharynx, dysenteria
- inflammatio, leucaemia, virus
- laparoscopia, typhus, organismus
- therapia, digitus, gingiva
- gangraena, diagnosis, tonsilla
- injectio, lymphata, oxygenium
- vademecum, insufficientia, chirurgia

Vowels

A **Ā** B C D **E** **Ē** F G H **I** **Ī** K L M N

O **Ō** P Q R S T **U** **Ū** V X **Y** **Ȳ** Z

Vowels

Long

Ā (father) frāctūra

Ē (sad) artēria

Ī (intrigue) spīna

Ō (door) sensōrius

Ū (boom) ruptūra

Y (analysis) hypophysis

Short

A (cut) lingua

E (met) vertebra

I (intrigue) digitus

I (yes) > **J**

O (on) skeleton

U (put) uterus

Y (lady) tympanum

Diphthongs

AE=Ē (care) anaemia

OE=Ē (care) lagoena

Greek words

OE (o-e) dyspnoe

EU (e-u) euthanasia

Consonants

A Ā **B** C **D** E Ē **F** G H I Ī K **L** **M** **N**

O Ō **P** Q **R** S **T** U Ū **V** X Y Ŷ Z

Consonant/group of consonants	Pronunciation	Example
1: c + a, o, u, consonants c + ae, oe, e, i, y	[k] medical [ts] tsar	c <u>a</u> mera, c <u>o</u> sta, c <u>u</u> ltivatio, c <u>r</u> anium c <u>a</u> ecus, c <u>o</u> eliac <u>i</u> a, c <u>e</u> ntrum, c <u>i</u> rculatio, c <u>y</u> nismus
2: ch	[x] lo ch	chirurgia, cholera

Consonants

Consonant/group of consonants	Pronunciation	Example
3: g gu + vowel	[g] ground [gv]	gramma, gastritis lingua, sanguis
4: h	[h] house	herba, haematologia
5: j + vowel	[y] yes	iniectio/injectio, maior/major
6: p p + h	[p] present [f] physiology	pneumonia, pulmo phantasia, pharmacia
7: qu+ vowel	[kv] quarrel	aqua, quadriceps
8: r r+h	[r] rupture [r]	vertebra, ruptura rheuma, rhinitis

Consonants

Consonant/group of consonants	Pronunciation	Example
9: s/ss <i>s between two vowels and following after l, r, n</i>	[s] some [z] zebra	serum, fossa nasus, incisura, pulsus, tonsilla, inversus, suspensio
10: t ti + vowel <i>s/t/x + ti + vowel</i> t+h	[t] tongue [tsi] [ty] [t]	trauma, tactus operatio, substantia tibia, ostium, mixtio therapia, thermometrum
11: z	[z] zone	zoologia

- **Masculine** (e.g. nervus)
- **Feminine** (e.g. fractura)
- **Neutral** (e.g. cerebrum)

Not always intuitive – you have to learn the gender of each noun !!!

Why?

to properly inflect the noun
and connect adjectives to it

- **Singular** (=1)
- **Plural** (=2 and more)

- **ENGLISH:** the order of the words in a sentence/phrase gives the information on their grammatical function

e.g. complicated fracture of the left humerus

(**adjective** – **noun** – non-agreed attribute (*of...*) – **WORD ORDER MATTERS**)

- **LATIN:** the form of each word in a sentence/phrase gives the information on its grammatical function

e.g. Fractura humeri sinistri complicata = fractura complicata humeri sinistri – **ENDINGS MATTER**

- **English:** meaning changes if we change word order

soft ulcer in duodenum x
~~ulcer in soft duodenum~~

- the function of a word is conveyed by WORD ORDER (Subject-Verb-Object rule)

- **Latin:** meaning does not change

soft ulcer of/in duodenum

*ulcus molle duodeni =
ulcus duodeni molle*

etc.

- the function of a word is conveyed by its ENDING!!!

Function of case in medical terms

case	function	use	vocab system
NOMINATIVE	subject of the phrase always first in the sentence!!	ANATOMY corpus ulnae (= body of ulnar bone)	1 st dictionary entry
GENITIVE	~ English „of“	ANATOMY caput femoris (= head of thigh bone)	2 nd dictionary entry
ACCUSATIVE	after prepositions	CLINICAL DIAGNOSES post operationem (after the operation)	
ABLATIVE		sine complicationibus (=without complications)	

status post implantationem osteoprotheseos coxae sine complicationibus

↑
NOMINATIVE
= state/condition

↑
ACCUSATIVE
= after implantation

↔
GENITIVE
= of osteoprothesis
= of hip bone

↑
ABLATIVE
= without complications

= state after the implantation of osteoprothesis of hip bone without complications

DICTIONARY ENTRY

CAUTION! When learning new words ALL THREE FORMS are EQUALLY important for the future ability to use the noun in context.

English noun is presented only in its single form (nominative singular)

Latin noun is presented in three forms

Muscle =
Bone =

MUSCULUS,
OS,

I,
OSSIS,

M.
N.

Basic form
(full nominative)

Genitive ending/or
even full Genitive form
if the word is short

Gender
abbreviation

Genitive ending (2nd info) = Declension

DECLENSION	1 st	2 nd	3 rd	4 th	5 th
GENITIVE ENDING	-ae (-es)	-i	-(?)-is	-us	-ei
EXAMPLE	coxa, ae , f.	humerus, i , m. cranium, ii, n.	coccyx, gis , f. dens, dentis, m. femur, oris, n. pelvis, is, f.	arcus, us , m. genu, us, n.	faci es , ei, f.

Declensions are groups of nouns (or adjectives) that use the same set of case endings.

Without learning Genitive form, you cannot classify the noun into a proper declension group, thus, you cannot use it properly in a sentence.

= a group of nouns that share the same case endings

(have the same set of case endings), see the **declension table**

Each noun belongs to one of 5 declensions:

- 1st declension – a-stems – ven-**a**-rum
- 2nd declension – o-stems – nerv-o-rum
- 3rd declension
 - i-stems – pelv-**i**-um
 - consonant stems – dolo-**r**-um, pon-**t**-um, sectio-**n**-um
- 4th declension – u-stems – duct-**u**-um
- 5th declension – e-stems – faci-**e**-rum

GENITIVE STEM

IT IS CRUCIAL TO KNOW THE STEM TO CREATE ALL OTHER CASES, because the endings are always attached to the stem of the word !!!

how do I know the stem?

remove the genitive ending, what stays is the stem!

		dol-or		
	humer-us	dolor-is	arc-us	
ven-a	humer-i	corp-us	arc-us	faci-es
ven-ae		corpor-is		faci-ei
	diamet-er	de-ns	gen-u	
	diametr-i	dent-is	gen-us	

= words describing nouns

Adjectives always have to correspond with the noun to which they belong in gender, number and case!!!!

fractura ulnae dextrae complicata
vertebrae thoracicae
ad lagoenam fuscam
cum anaemia perniciosa

Why do you think this is so?

- with accusative
- with ablative

➤ **See the Overview: Basic
grammatical concepts in IS**

- **Assign the terms given in Handout 1 to their declensions**
- **Write down the full Genitive and stem of each term**