

# Basic medical terminology



**2<sup>ND</sup> SEMINAR**

# Read aloud



- Infarctus myocardii recens
- Fractura comminutiva colli femoris lateris dextri
- Commotio cerebri
- Vulnus punctum thoracis ad pulmonem lateris sinistri penetrans
- Aethylismus chronicus
- Appendicitis acuta
- Intoxicatio carboneo hydroxydato (CO) gradus maioris

# Read aloud



- Typhus reccurens
- Tonsillitis purulenta recidivans
- Diabetes mellitus stabilis
- Dermatitis allergica protrahens
- Vitium cordis acquisitum
- Infarctus haemispherii sinistri cerebri, Hemiparesis
- Nephrolithiasis, colica renalis subsequens
- Tumor ventriculi ad investigationem et observationem

# Questions



- How do I decide to what declension the word belongs?
  - I need to know the genitive ending
- What are the genitive endings of Latin declensions?

DECLENSION	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>
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.	facies, ei, f.

# Questions



- What is a stem?
  - a stem is a form to which affixes can be attached
- How can we identify the stem of a Latin noun?
  - we take genitive form and we remove the genitive ending
    - ✦ vena, ven-ae
    - ✦ musculus, muscul-i; diameter, diametr-i
    - ✦ auris, aur-is; corpus, corpor-is
    - ✦ arcus, arc-us; genu, gen-us
    - ✦ facies, faci-ei

# Gender



- The grammatical gender of a noun **affects the form of other words** related to it.
- In Latin, **adjectives** (and pronouns) **change** their form **depending on the noun** to which they refer.
- ENGLISH has 3 genders:
  - HE – refers to male humans and animals
  - SHE – refers to female humans and animals
  - IT – inanimate objects or animals
- LATIN has 3 genders:
  - not only humans and animals, but also other objects are thought of as being:
    - ✦ masculine -> discipulus (he-student), musculus (muscle)
    - ✦ feminine -> discipula (she-student), vena (vein)
    - ✦ neuter -> corpus (body)



# Latin – inflectional language



- In many languages, Latin and Greek among them, nouns **inflect** (change their form) for number and for case.
  - Inflection for **number** involves *singular* (sg.) : *plural* (pl.) forms (eg. *forearm* : *forearms*, *antebrachium* : *antebrachia*) and is present in English as well.
  - Inflection for **case** involves changing the form of the noun according to its syntactic function/meaning. Latin has extensive case system in which a special form is used for every specific meaning. In medical terminology we use 4 out of 6 Latin cases to express the following meanings:

# Cases and their meanings



## LATIN

*system of specific case endings + prepositions*

1. **NOMINATIVE** – subject (ending)
2. **GENITIVE** – dependency of two nouns, possession (ending)
4. **ACCUSATIVE** – object, movement (preposition + ending)
6. **ABLATIVE** – place, location, instrument, cause (preposition + ending)

## ENGLISH

*prepositions or word order*

- > subject of the sentence
- > *of*
- > object of the sentence
- > *by, with, to, because of...*

In medical terminology **accusative** and **ablative** cases are used **only after the preposition**.

In books, cases are labelled with numbers 1, 2, 4, and 6 or with corresponding abbreviations

- nom., gen., acc., abl. - for practical reasons.



# Nominative –singular and plural



Declens.	I.			II.				III.					IV.		V.	
Paradigm	vena	<i>systole</i>	<i>diabetes</i>	nervus	septum	<i>nephros</i>	<i>colon</i>	dolor	corpus	pelvis	<i>dosis febris</i>	rete	ductus	genu	facies	
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.															
	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.															
	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				

Nominative singular is the **first** form listed in the dictionary.

# Use the chart with endings to change the following words into plural



coxa \_ \_ coxae \_ \_

I COX-

coxae

cervix \_ \_ cervicis \_

III cervic-

cervices

mentum \_ menti \_

II ment-

menta

arcus \_ arcus \_

IV arc-

arcus

# Introduction to syntax

## NOUN IN APPOSITION I.



- noun + noun < GENITIVE
  - Translated: using *of*
  - Meaning: state of dependency, possession
  
- **EX:** Fractura costae // fractura costarum
  - Fracture of rib                      Fracture of ribs
  - ! = rib fracture                      = rib fractures

# Genitive –singular and plural



Declens.		I.			II.				III.					IV.		V.
Paradigm		vena	<i>systole</i>	<i>diabetes</i>	nervus	septum	<i>nephros</i>	<i>colon</i>	dolor	corpus	pelvis	<i>dosis febris</i>	rete	ductus	genu	facies
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 <sup>▲</sup>	-os	-on <sup>▲</sup>	?	? <sup>▲</sup>	-is/-es	-(s)is/ -xis/-osis	-ar/-e/ -al <sup>▲</sup>	-us	-u <sup>▲</sup>	-es
	2.															
	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 <sup>▲</sup>	-i	-a <sup>▲</sup>	-es	-a <sup>▲</sup>	-es	-es	-ia <sup>▲</sup>	-us	-ua <sup>▲</sup>	-es
	2.															
	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	-ibus
		+ 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			

Genitive singular ending is the **second** form listed in the dictionary.

# Connect two nouns



*ex: caput + costa > caput costae*      *head of rib*

caput + femur -> caput **femoris**

caput + fibula -> caput **fibulae**

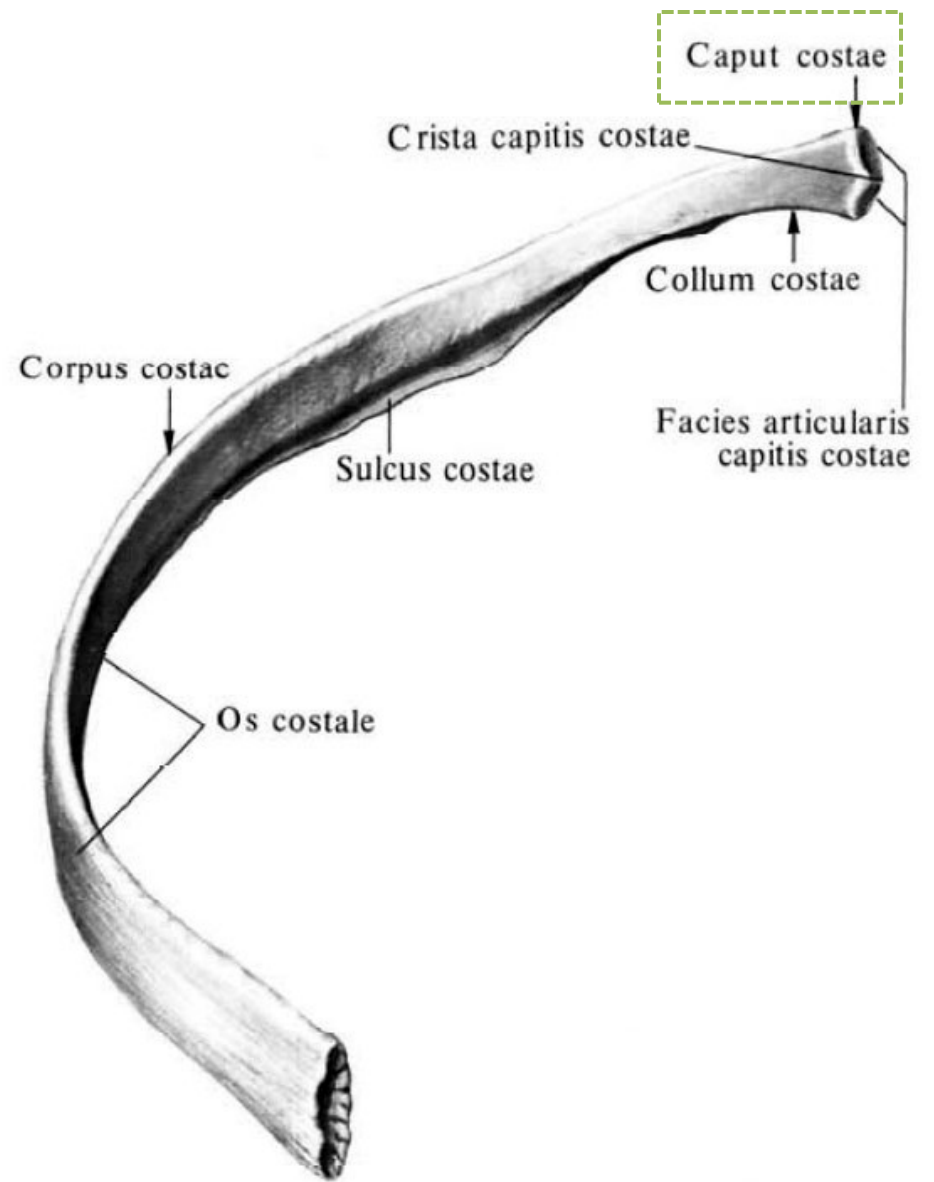
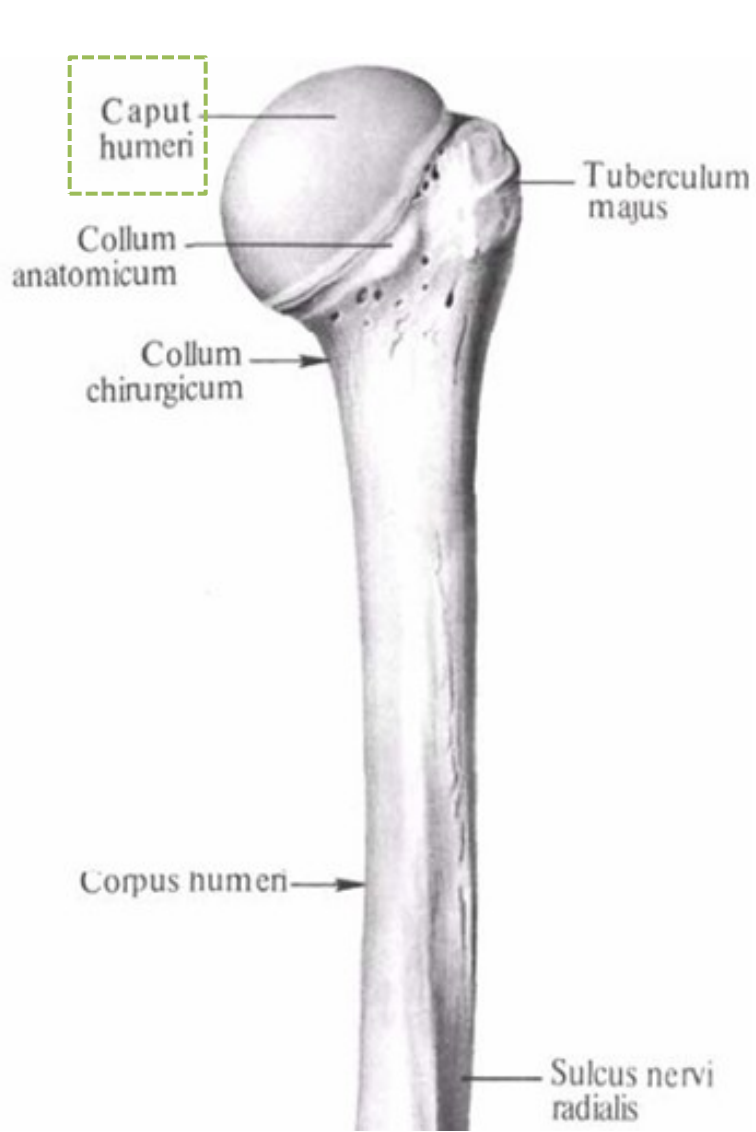
caput + humerus -> caput **humeri**

caput + phalanx -> caput **phalangis**

caput + radius -> caput **radii**

caput + talus -> caput **tali**

caput + ulna -> caput **ulnae**

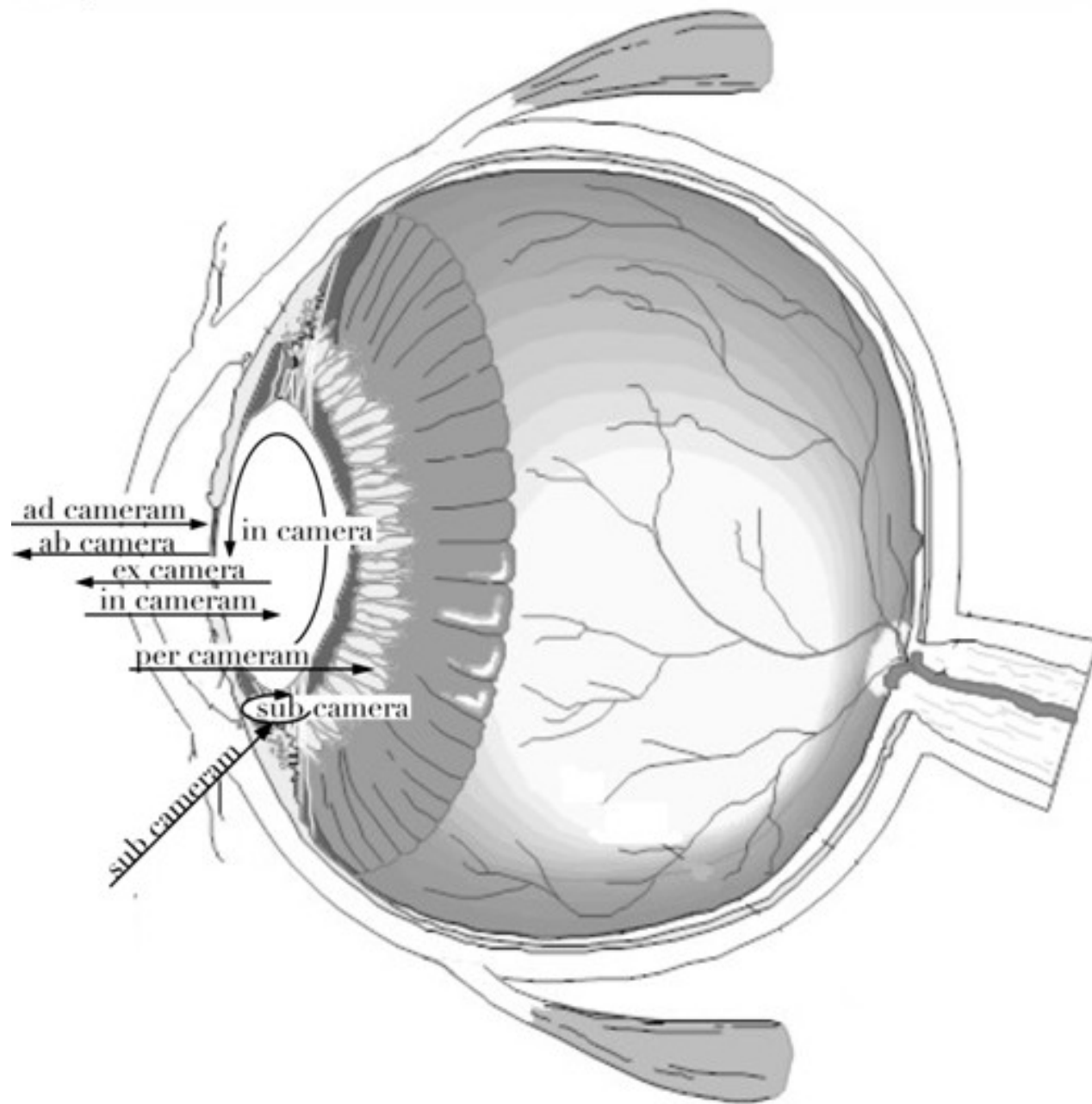


# Prepositions and prepositional phrases



- Denote:
  - Spatial relations                      sub, infra, post
  - Temporal relations                      post, ante
  - Causal relations                        propter, e/ex
  
- Can be connected with:
  - Accusative case
  - Ablative case
  - Both Accusative and Ablative case

The dictionary entry will tell you what case to put after the preposition.





# Accusative and ablative singular and plural



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.															
	6.															
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.															
	6.															
		+ 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			

# Connect nouns with prepositions



<b>sub + Abl.</b> (where?)	<b>shoulder blade</b>	<b>skin</b>	<b>tongue</b>
under	<i>sub scapula</i>	<i>sub cute</i>	<i>sub lingua</i>
<b>sub + Acc.</b> (where to?)	<b>eye</b>	<b>rib</b>	<b>kneecap</b>
under	<i>sub oculum</i>	<i>sub costam</i>	<i>sub patellam</i>
<b>in + Abl.</b> (where?)	<b>tooth</b>	<b>mouth</b>	<b>bone</b>
in, at	<i>in dente</i>	<i>in ore</i>	<i>in osse</i>
<b>in + Acc. (where to?)</b>	<b>skull</b>	<b>orbit</b>	<b>hypogastrium</b>
to	<i>in cranium</i>	<i>in orbitam</i>	<i>in hypogastrium</i>

# 1<sup>st</sup> Latin declension



- In the 1<sup>st</sup> declension we decline nouns that have:

Genitive sg. ending	<b>-AE</b>
Nominative sg. ending	<b>-A</b>
Gender	Mostly F Never N Exceptions M

**NOUNS OF THE 1<sup>st</sup> Declension that are of masculine gender are:**

- Names of specialists – Dentista, ae, m.
- Names of muscles – Agonista, ae, m.

# 1<sup>st</sup> Latin declension



Declens.		I.			II.			III.					IV.		V.	
Paradigm		vena	<i>systole</i>	<i>diabetes</i>	nervus	septum	<i>nephros</i>	<i>colon</i>	dolor	corpus	pelvis	<i>dosis</i> <i>febris</i>	rete	ductus	genu	facies
Gender			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.		-e	-es	-us/-er	-um	-os	-on	?	?	-is/-es	-(s)is/ -xis/-osis	-ar/-e/ -al	-us	-u	-es
	2.		-es	-ae	-i	-i	-i	-i	-is	-is	-is	-is/-eos	-is	-us	-us	-ei
	4.		-en	-am	-um	1	-on	1	-em	1	-em	-im/-in	1	-um	1	-em
	6.		-e	-a	-o	-o	-o	-o	-e	-e	-e	-i	-i	-u	-u	-e
P l u r a l	1.		-ae	-ae	-i	-a	-i	-a	-es	-a	-es	-es	-ia	-us	-ua	-es
	2.		-arum	-arum	-orum	-orum	-orum	-orum	-um	-um	-ium	-ium	-ium	-uum	-uum	-erum
	4.		-as	-as	-os	1	-os	1	-es	1	-es	-es	1	-us	1	-es
	6.		-is	-is	-is	-is	-is	-is	-ibus	-ibus	-ibus	-ibus	-ibus	-ibus	-ibus	-ibus
					+ 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			

# 1<sup>st</sup> Latin declension



- Example word: vēna, ae, f.

case	singular	plural
nom.	vēna	vēnae
gen.	vēnae	vēnarum
ak.	vēnam	vēnas
abl.	vēnā	vēnis

# 1<sup>st</sup> Greek declension



- In the first declension we decline nouns that have:

<b>Genitive sg. ending</b>	<b>-ES</b>	<b>-AE</b>
<b>Nominative sg. ending</b>	<b>-E</b>	<b>-ES</b>
<b>Gender</b>	<b>F</b>	<b>M</b>

# 1<sup>st</sup> Greek declension



Declens.		I.			II.				III.					IV.		V.
Paradigm		vena	<i>systole</i>	<i>diabetes</i>	nervus	septum	<i>nephros</i>	<i>colon</i>	dolor	corpus	pelvis	<i>dosis febris</i>	rete	ductus	genu	facies
Gender		f.			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			-us/-er	-um	-os	-on	?	?	-is/-es	-(s)is/ -xis/-osis	-ar/-e/ -al	-us	-u	-es
	2.	-ae			-i	-i	-i	-i	-is	-is	-is	-is/-eos	-is	-us	-us	-ei
	4.	-am			-um	1	-on	1	-em	1	-em	-im/-in	1	-um	1	-em
	6.	-a			-o	-o	-o	-o	-e	-e	-e	-i	-i	-u	-u	-e
P l u r a l	1.	-ae			-i	-a	-i	-a	-es	-a	-es	-es	-ia	-us	-ua	-es
	2.	-arum			-orum	-orum	-orum	-orum	-um	-um	-ium	-ium	-ium	-uum	-uum	-erum
	4.	-as			-os	1	-os	1	-es	1	-es	-es	1	-us	1	-es
	6.	-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			

# 1<sup>st</sup> Greek declension



	<i>systole, es, f</i>	<i>diabetes, ae, m.</i>
nom. sg.	<i>systole</i> <b>e</b>	<i>diabetes</i> <b>es</b>
gen. sg.	<i>systole</i> <b>s</b>	<i>diabetae</i> <b>e</b>
ak. sg.	<i>systole</i> <b>en</b>	<i>diabetam</i> <b>m</b>
abl. sg.	<i>systole</i> <b>e</b>	<i>diabeta</i> <b>a</b>

- All nouns inflected like *systole, es, f.* are of feminine gender.
- All nouns inflected like *diabetes, ae, m.* are of masculine gender.
- Paradigms *vena, systole* and *diabetes* have identical endings in plural.



# 1<sup>st</sup> Greek declension



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.				-i	-a	-i	-a	-es	-a	-es	-es	-ia	-us	-ua	-es
	2.				-orum	-orum	-orum	-orum	-um	-um	-ium	-ium	-ium	-uum	-uum	-erum
	4.				-os	1	-os	1	-es	1	-es	-es	1	-us	1	-es
	6.				-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			