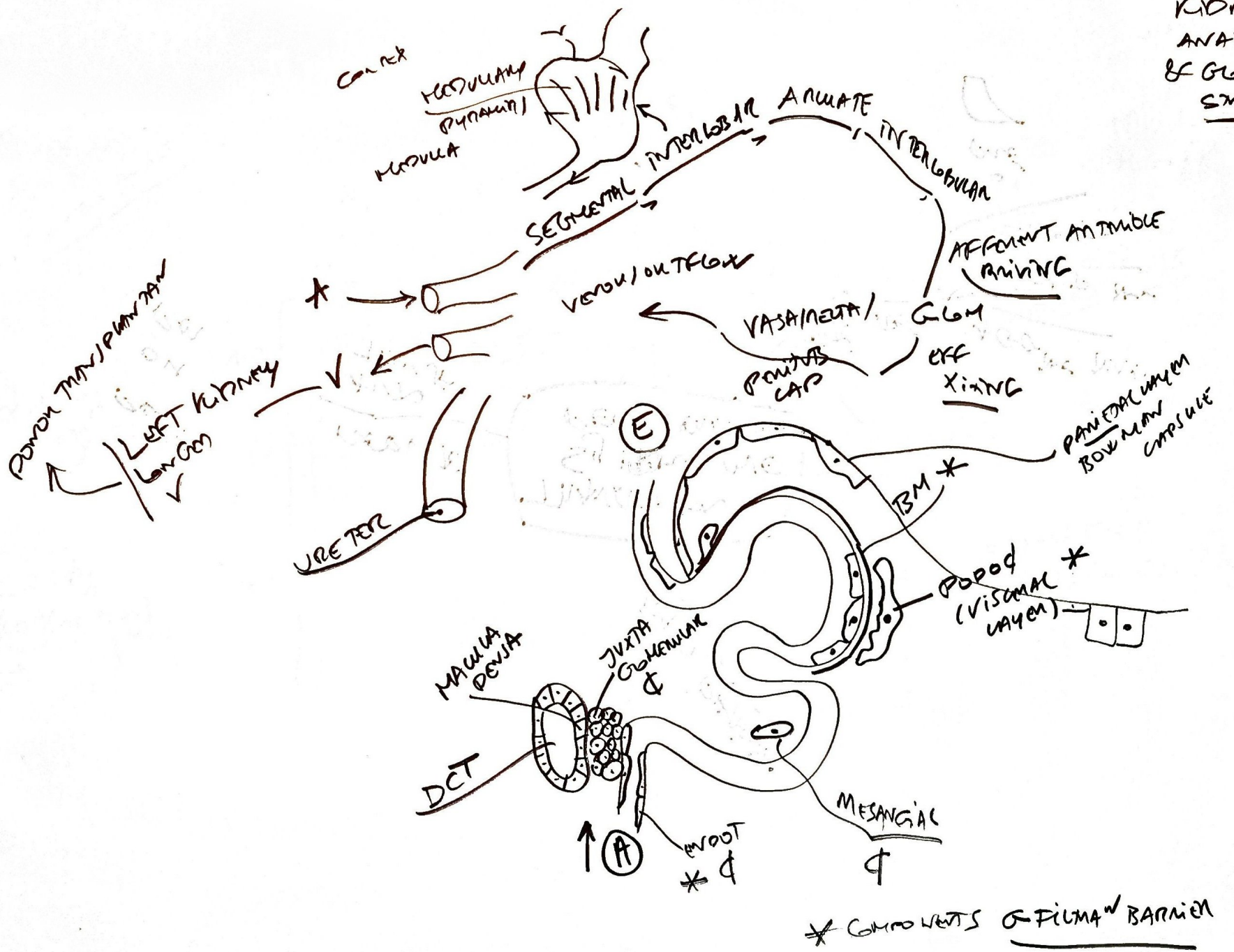


KIDNEY
ANAT
& GLOM
SM.



Fluid Components

60-40-20 rule
 $\frac{10.5}{14.0} + \frac{2.5}{14.0}$

$\approx 16 \text{ kg}$
 (20% of 70 kg)

$\frac{28}{44} \approx 62$

$\approx 28 \text{ kg}$
 (40% of 70 kg)

★ TBW
 60% of BODY MASS = 42 kg \approx 42L

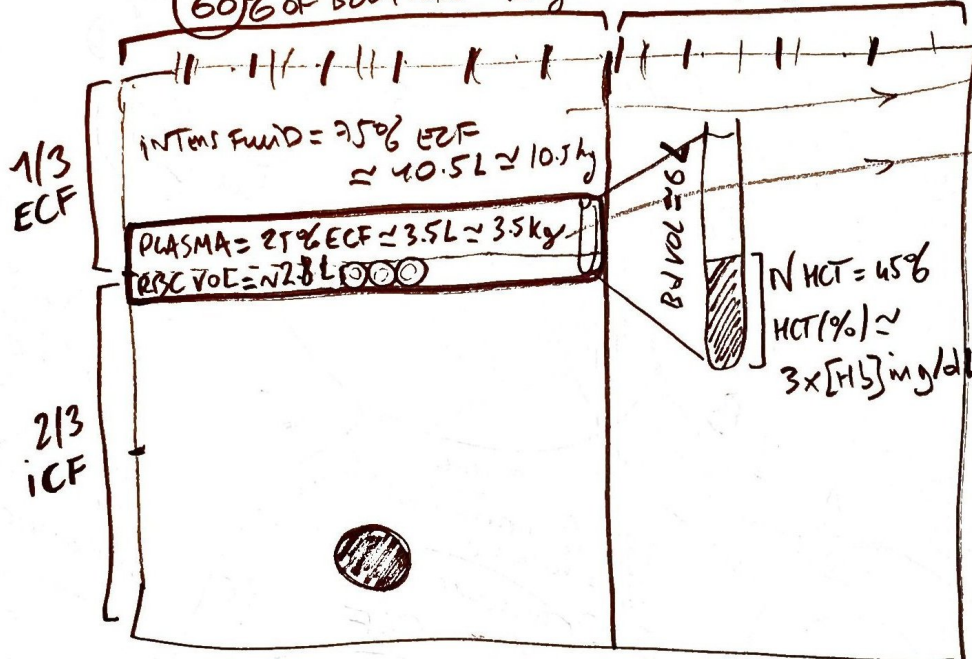
40% of BM = 28 kg

$\frac{42}{28} = 1.5$

Hikin: HIGH [K⁺]_{ic}

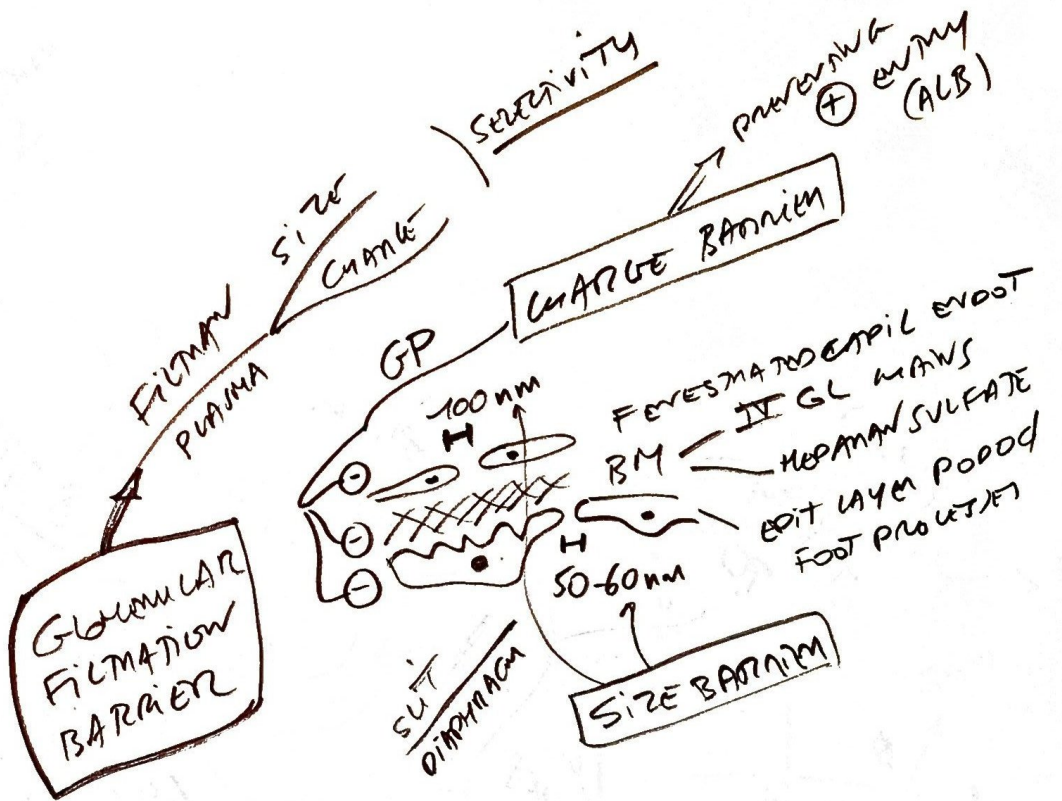
mannitol

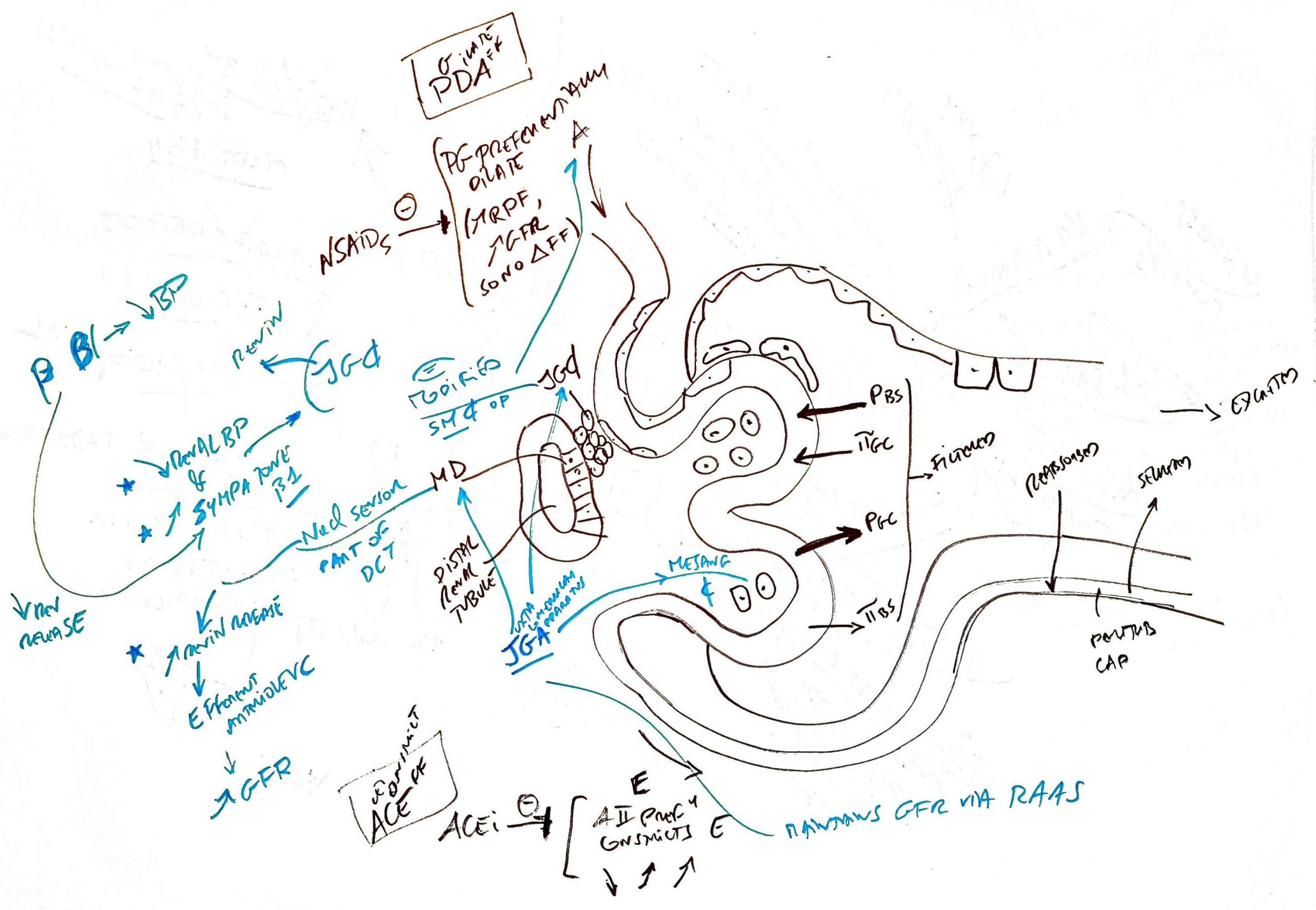
mass approx ALB



$\frac{3.5}{2.8} = 6.3$

OSMOLALITY = 285-295 mOsm/kg H₂O





GLUTE PDA

NSAIDS ⊖ → PG PROTECTANT (PGE2, PGI2) → (MRPF, ↑GFR, SONO ΔFF)

BP ↓ → BP ↓

↓ Renal BP & SYMPA TONE → ↓ GFR

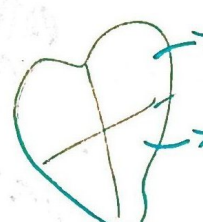
↓ Reninase → ↓ Effort/ATRIAL/PEV → ↓ GFR

↓ GFR

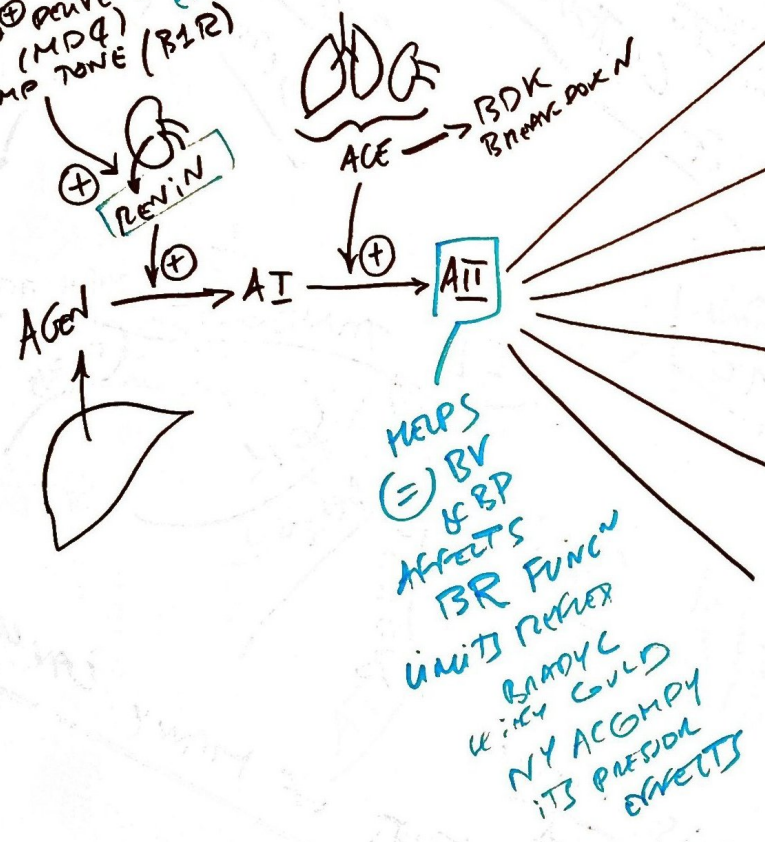
DOMINANT ACE

ACEi ⊖ → ACE → ALL PHELY CONSTRUCTS → ↓ ↑ ↑

MAINTAINS GFR VIA RAAS

→ VOLUME →  → ANP - MAY ACT AS A "CHECK" ON RAAS
 → BNP - RELAXES VASC SM VIA cAMP
 - DILATES AEF A°
 - PROMOTES NATRIURESIS
 - PROMOTES VASODILATION
 RAAS → ↓ GFR → ↓ RENIN

↓ VOLUME → ↓ BP (Gd)
 ↓ NO⁺ delivery TO KIDNEY
 (MDQ) → ↑ SYMP TONE (B1R)
 → ↑ RENIN



ATII → VC → ↑ BP
 CONSENSUS OFF A° G → ↑ EFF TO ⊖ REN FV (GFR) IN LOW VOL STATES (LOW RBF)

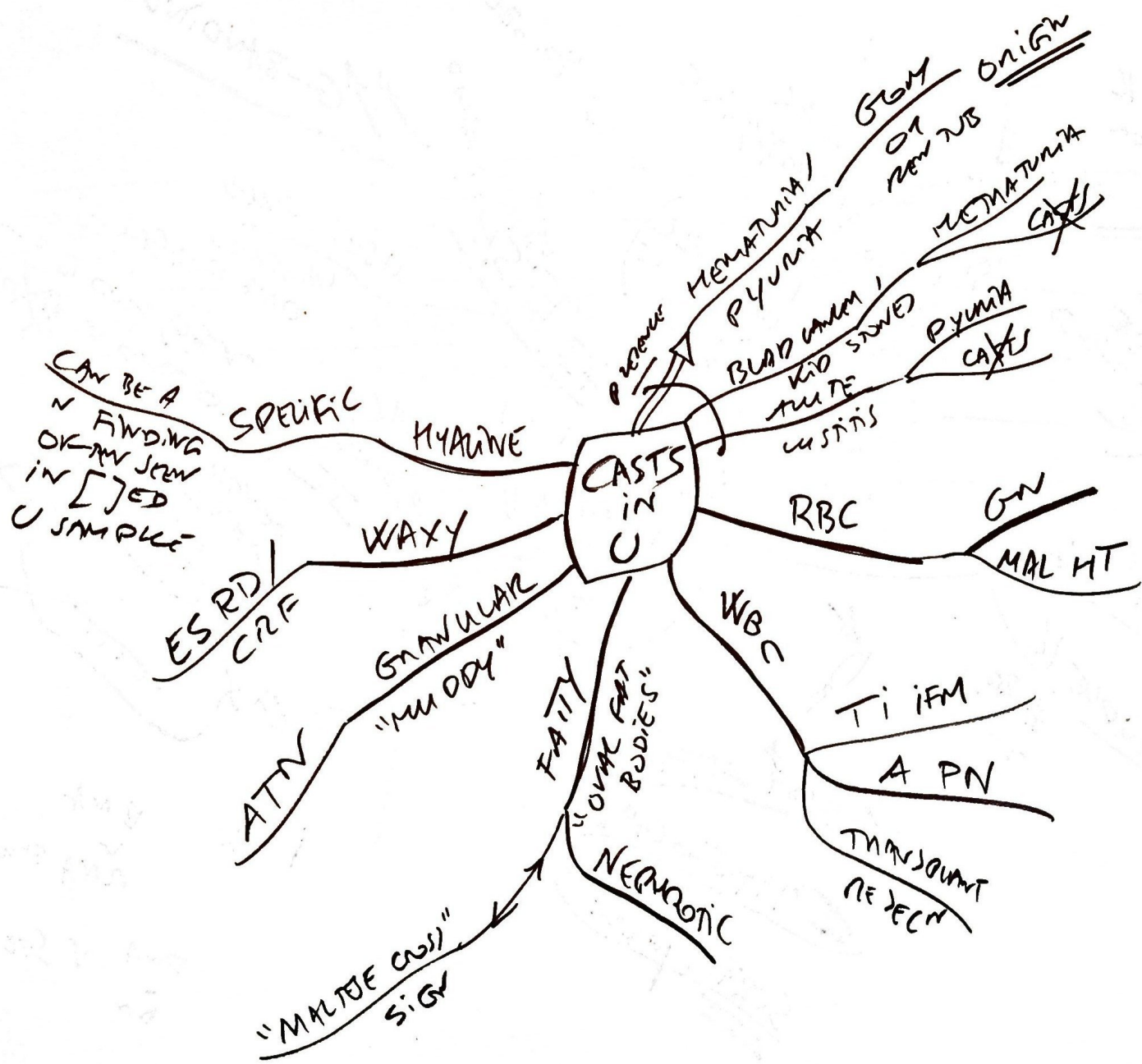
↑ NO⁺ CHANNEL INSERTION & ↑ ACTIVITY NO⁺/K⁺ PUMP
 - ↑ K⁺ & H⁺ EXCHⁿ BY WAY PRINCIPAL & K⁺ CHANNEL
 α-INTERCALATED & H⁺ ATPASE
 → CREATES FAVORABLE Na⁺ GRADIENT FOR Na⁺ & H₂O REABSN

↑ AQUAPORIN IN PRINCIPAL → H₂O REABSN
 ↑ PCT NO⁺/H⁺ ACTIVITY → Na⁺ HCO₃⁻ & H₂O REABSN
 SIM HT → THIRST (CAN PERMIT GEN MACH ALKALOSIS)

- TO REG OSMO⁴
 - ALSO RE → LOW VOL STATES

TO REG ECF & NO⁺ GRADIENT
 RE → LOW VOL STATES
 RE → HYPERKALEMIA BY ↑ K⁺ EXCHⁿ

HELPS ⊖ BY ↓ BP AFFECTS IFR FUNCTION
 LIMITS REABSN
 BRADYCARDIA
 KIDNEY GUILD
 NY ACGMPY ITS PRESSION EFFECTS



NOM
GLOM

	CHAR	
FOCAL	< 50% G INVOLVED	EX ^{EXTRACAPILLARY} FSGS
DIFFUSE	>	D PROLIF GN
PROLIFERATIVE	HYPER G	MP GN
MEMBRANOUS	THICKENING GBM	MN ^{MEMBRANOUS}
PRIMARY	SPEC IMPACTING G	MCD ^{MINIMAL}
SECONDARY	SYST OR D ANOTH ORG ALSO IMPACTS G	SLE DIAB NP

GLOMERULAR DISEASES

NEPHROTIC

- HT, ABUN & GLOBULINE, OLIGEMIA, HEMATURIA
- P-U OPTIM SUB-NORMAL < 3.5 BUT IN SEVERE CASES MAY BE

- APS^{OUT} GN
- RP^{MIN} GN
- IgA NP (Ben GN)
- ALPORT SD
- MP GN

NEPHROTIC

- PODOC DISRUPT^N → WASTE BARRIER IMPAIRED
- MASSIVE P-U > 3.5 + HYPOALB-EM + HYPERLIPID EDENIA
- MAY BE < 1° DIRECT POD DAM OR 2° POD DAM ← SYST PROC (DIAB)

- FSGS (1° or 2°)
- MCD (1° or 2°)
- M^{POD} NP (1° or 2°)
- ANGIOPLASIS (2°)
- DIAB G-ND (2°)

-1-0

- SEVERE -1- + PROFOUND GBM DAM → DAM G-FB^{UM,MP} CHANGE →
- O-RANGE > 3.5 & GNGLUTANT POST-O-
- GN OCCUR WITH ANY -1- BUT MOST GN:

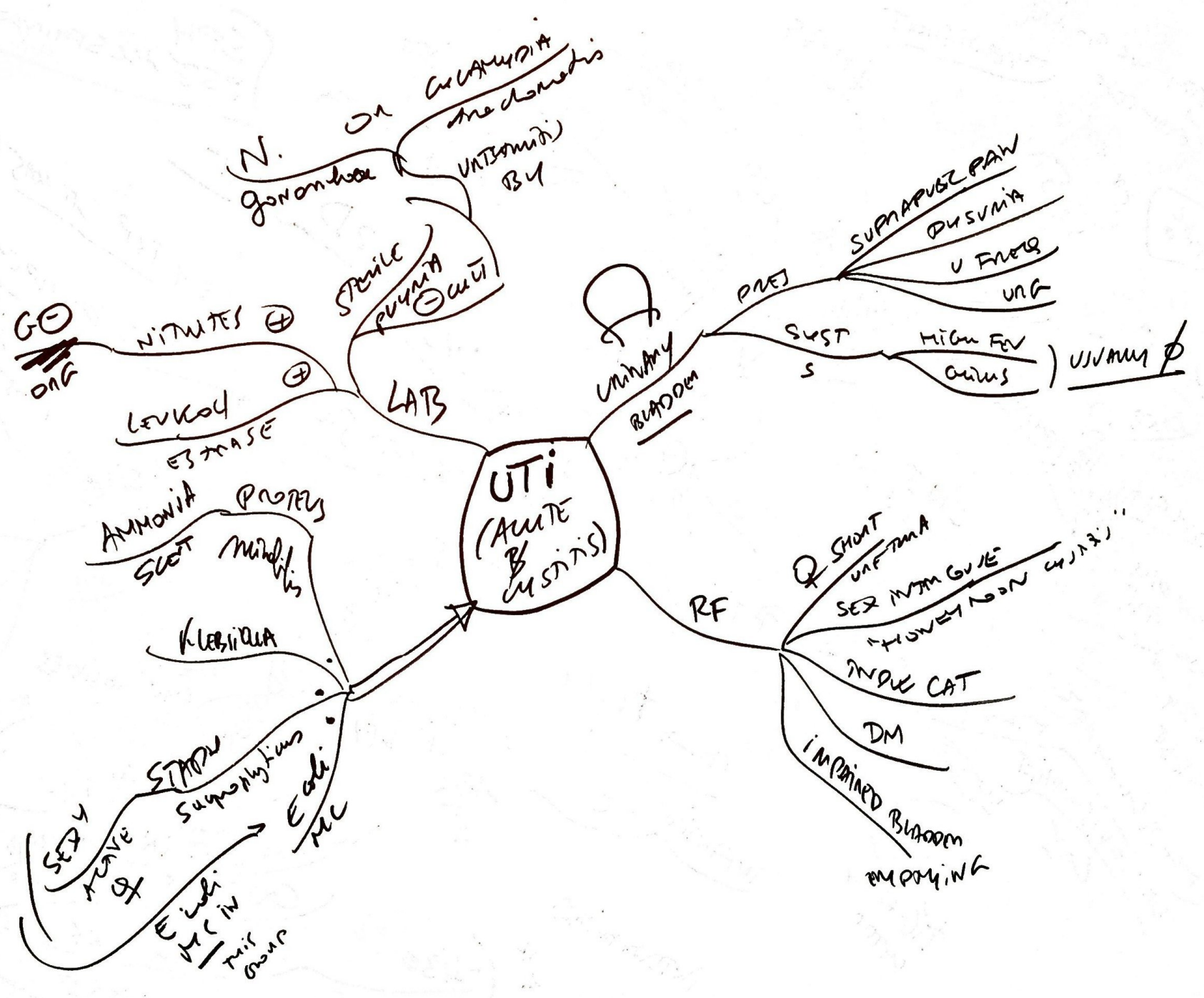
- DPGN
- MP GN

GRAMS P EXCURS^g/D

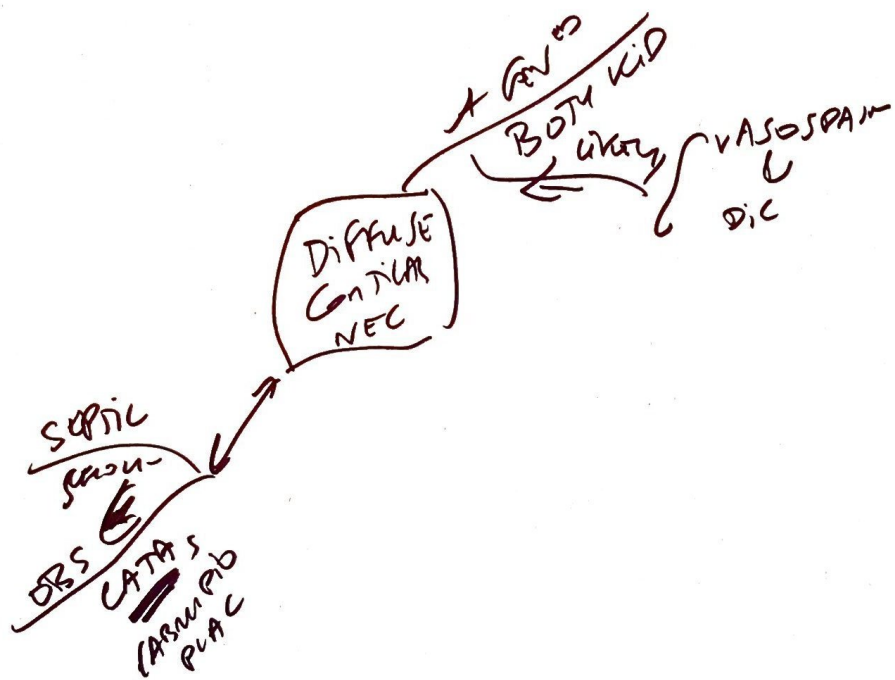
0.25

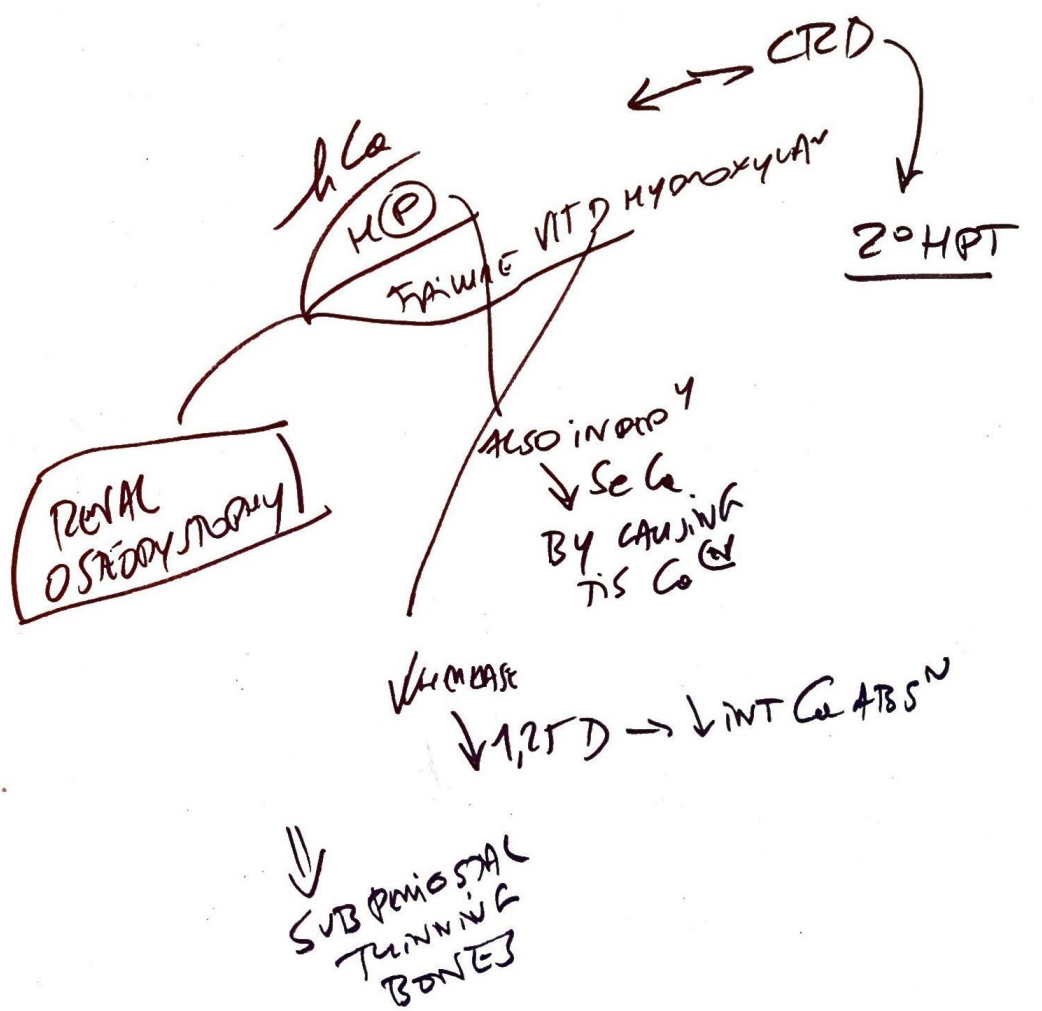
3.5

>3.5

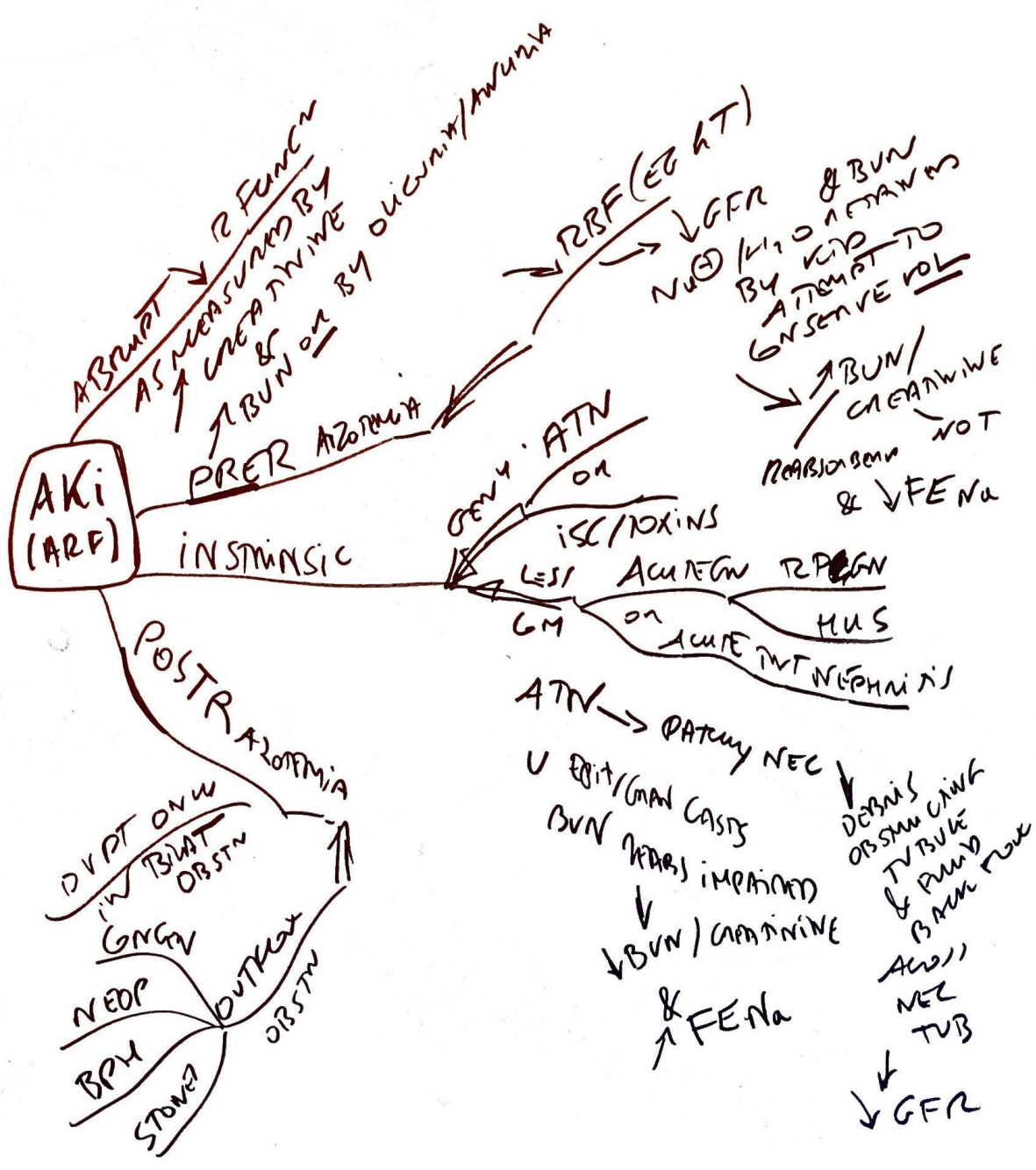


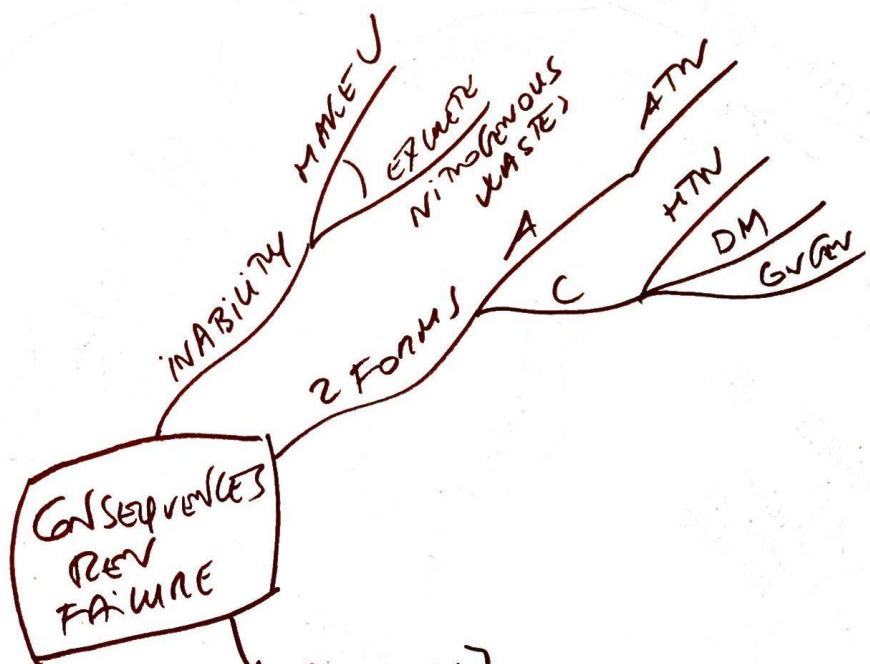
100



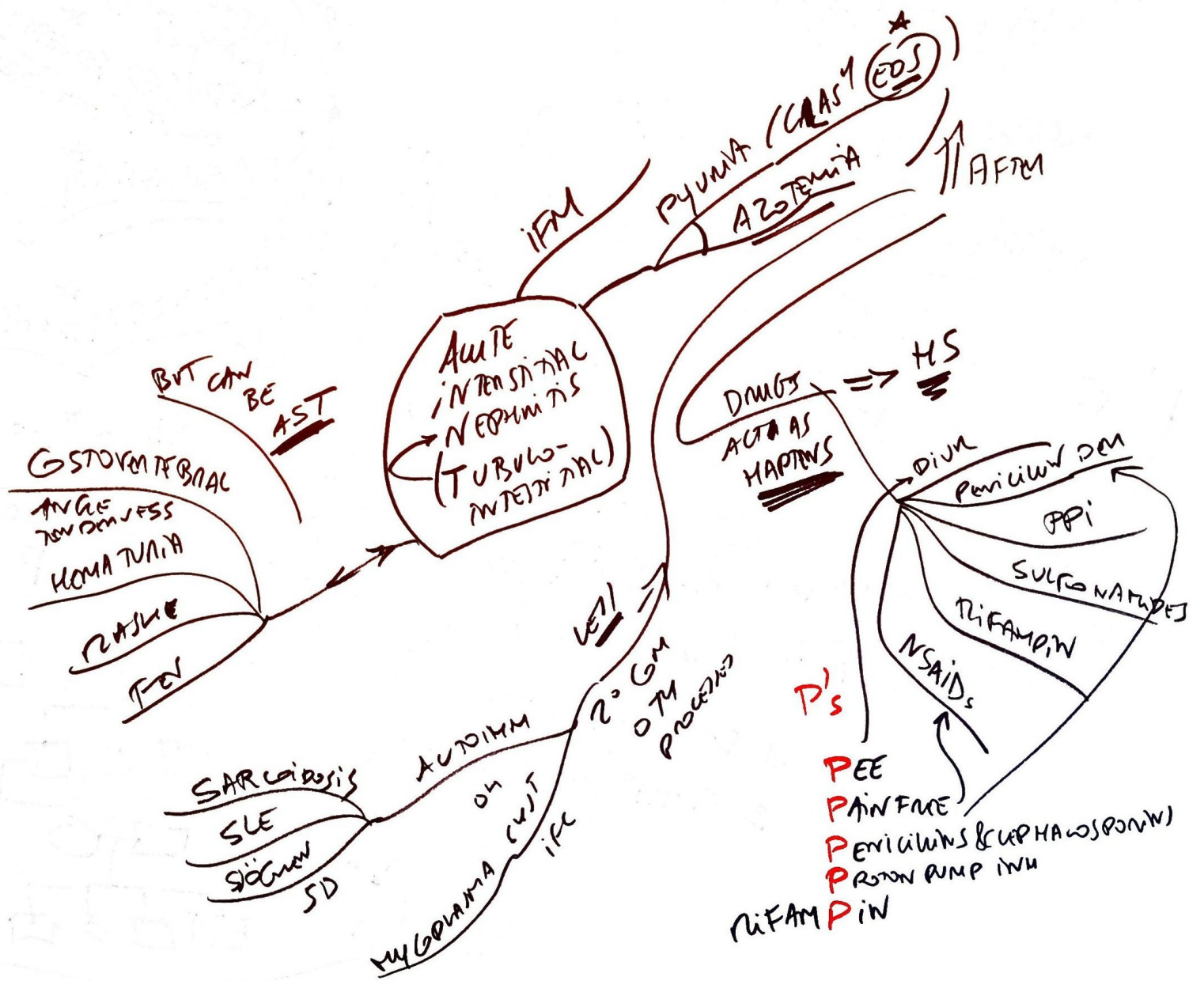


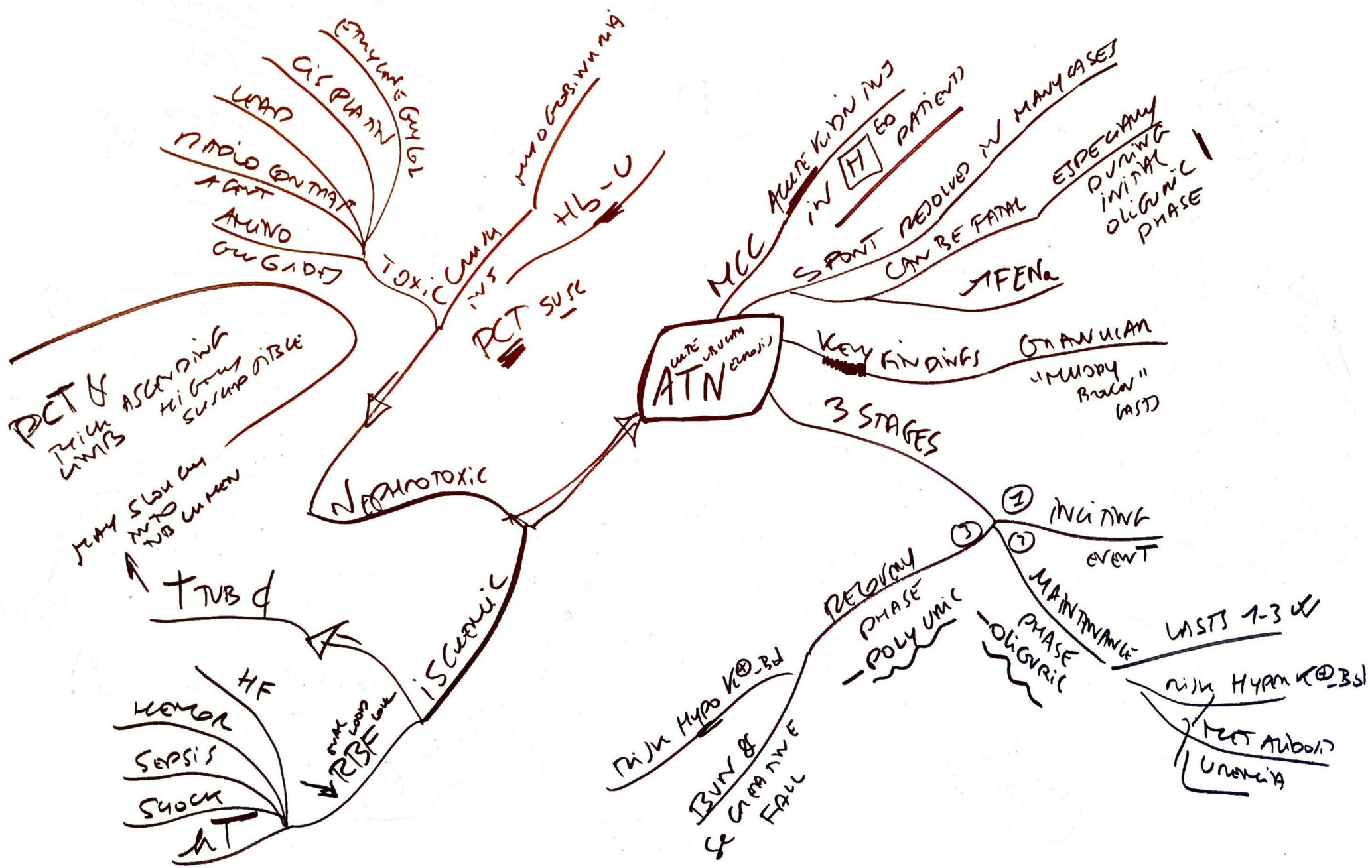
	PRE	INT	POST
U OSM	> 700	< 350	< 310
U Na MEq/L	< 20	> 40	> 60
FENa	< 1%	> 2%	< 1% H2O > 2% serum VARIES
BUN/Cr	> 20	< 15	

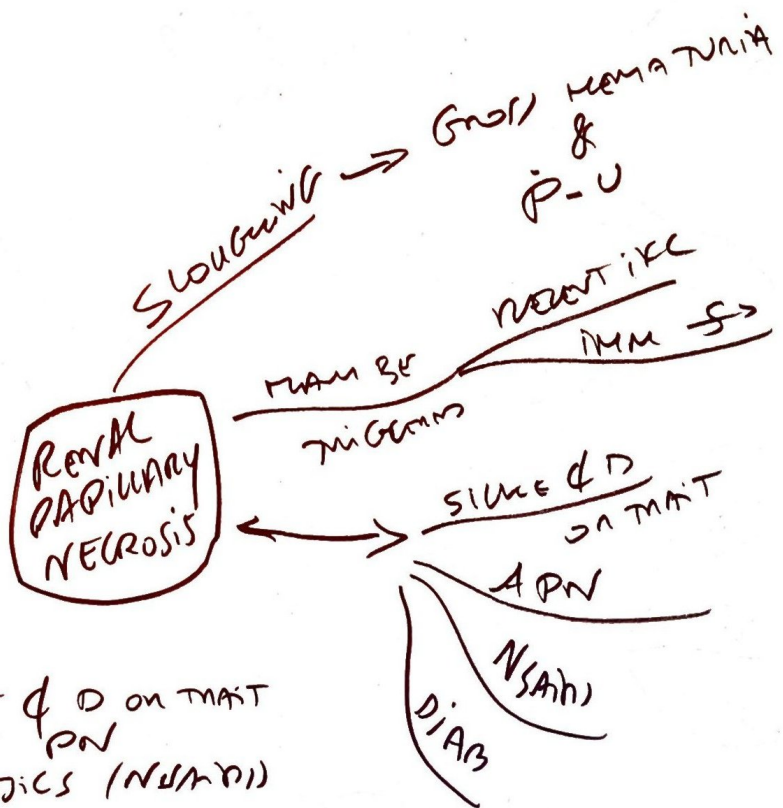




- M**ETABOLIC
- A**CIDOSIS
- D**YSLIPIDEMIA (EPO ↑ TG)
- H**YPERK⁺ - B₂
- U**REMIA - c/w. SD MANAGED BY ABUN
- N**⁺/H₂O RETENTION (HF, PULM HT) - NAUSEA, PERICARDIUM, ASTHMA, ENLARGED PAT
- G**ROUCH RETARDAN & DAPT DELAY HT) - PLAT DYSFN
- E**PO FAILURE (ANEMIA)
- R**ENAL OSTEO DYSOPLHY







SILVER & D ON TRAIT
ACTIVE PN
ANAESTHETICS (NSAIDs)
DIABETES

page
 with
 papillary nec