SKELETAL MUSCLE

EX GEN

SOFT TIS TUM

- "MAL FIB HIS"
- UNDIFFERENTIATED SARC
- FIBROSARC
- LIPOMA
- LIPOSARCOMA
- X;18 CHROM TRANSLOC°
- FIBROUS HISTIOCYTOMA
- SYNOV SARC
- RHABDOMYOSARC

ATROPHIES

- ANGULAR
- DISUSE
- DENERVA°
  - TARGET F
  - EMPEGRUPING

DYSTROPHIES

- DUCHENNE
  - MYOTONIA CONGENITA
  - PSEUDO HYPERTROPH
  - SEVERE CHILDHOOD
  - X LINKED INHERITANCE
- BECKER
- FACIOSCAPULOHUM
- LMB-GIRDLE
- MYOTONIC
  - CATARACTS
  - DISTAL ATROPHY
- GEN
- CONGEN
  - CORE D
  - NEMALINE
  - MITOCHOND
  - MATERNAL MODE INHER
- + SPEC HISTO
  - AUTO
  - ACh-R
  - MYASTHENIA GRAVIS
  - LAMBERT-EATON SD

BONES

METABOLIC

- HYPERT
- HYPERCAT
- DRUG INACT
- POSTMENOP
- STATE
- CA DEFIC
- BONE MASS
- OSTEOPOROSIS
- VON RECKLINGHAUSEN D
  - "BROWN TUMOR"
  - = OSTEITIS FIBROSA CYSTICA
- OSTEOMALACIA
  - VIT D DEFIC
  - RENAL
  - OSTEODYSTROP
- RICKETS
  - VIT D DEFIC
  - CRANIOTABES
  - LATE CLOS FONT
  - RAC ROSARY
  - HARRISON GROOVE
  - PIGEON BREAST
  - ↓ HEIGHT
- PAGET D
  - ↑ OSTEOBL ACTIV
  - LATE OSTEOLYS DEFORMANS
  - ↑ OSTEOCL ACTIV
  - ↑ OB
  - OC
  - BOTH
  - MIX
  - OLYT
  - MORPHO
  - MONO
  - POLY
  - IMO OSTEOID FORM
  - ↑ SARCOMA
  - OSTEOSARC
  - FIBROSARC
  - SE
  - ALK PHOSPHATASE
- SCURVY
  - SUBPERIOST OSTEOPOR
  - EPIDERMT
  - HAEMORRH
- ACHONDROPLASIA
  - LONG FEMUR
  - VERT BODIES = PSTT
  - MONOSTOTIC
  - POLY
  - MC-CUNE-ALBRIGHT SD
- FIBROUS DYSPLAS
- ASEPTIC NEC
  - = AVASC
  - LEGG-CALVÉ-PERTHES
  - OSGOOD-SCHLATTER D
  - KÖHLER D
- OSTEOGENESIS IMPERFECTA
  - = ALBERS-SCHÖNBERG D
- OSTEOPETROSIS = MARBLE BONE
  - BLUE SCLERAE
- PYOG OSTEOMYELITIS
  - OSTEOCL ACTIV
  - SEQUESTRUM INVOLUCRUM
- TBC OM
- LANGERHANS BIRBECK GRANULES & HISTIOCYTOSIS
  - LETTER-SIWE D
  - HAND-SCHÜLLER CHRISTIAN
  - EOSINOPHILIC GRANULOMA

JOINTS

IFC

- GANGLION CYST
- HYPERTROPHIC OSTEOARTHROP
- LYMED
- GONOC
  - MONOARTIC
  - KNEE

METABOLIC

- CHONDROCALCINOSIS = PSEUDOGOUT
  - (+) KNEE BIREF RHOMBOID
- GOUT
  - UNATE C
  - URATE CRYSTALS
  - ERYTHEMA°
  - NODULES FORM
- HLA B27
- SERO⊖ VE

OSTEO- = DEGEN

PROBABLE AUTOIMM

- IBD
- PSORIATIC
- REITER SD
- ANKYLOSING
- TYPES
- SPONDYLOARTHROP
- Ai HPLAS MYOP PANNUS SCAR NODULES
- RA
- VARIANTS
- STILL D
  - JUVENILE
- FELTY SD
- SJÖGREN SD
- RF
- ANA
- 11;22 T
- EXISTENCE
- FLI-1-PNET
- "SMALL BLUES"

ARTHRITIDES

- HEMP GAG KNEE
- OBL
- ≠
- F
- COMMON MUSCLE
- "SUNBURST"
- PATTERN
- METS CA
- MM HOMO
- GON

TUM

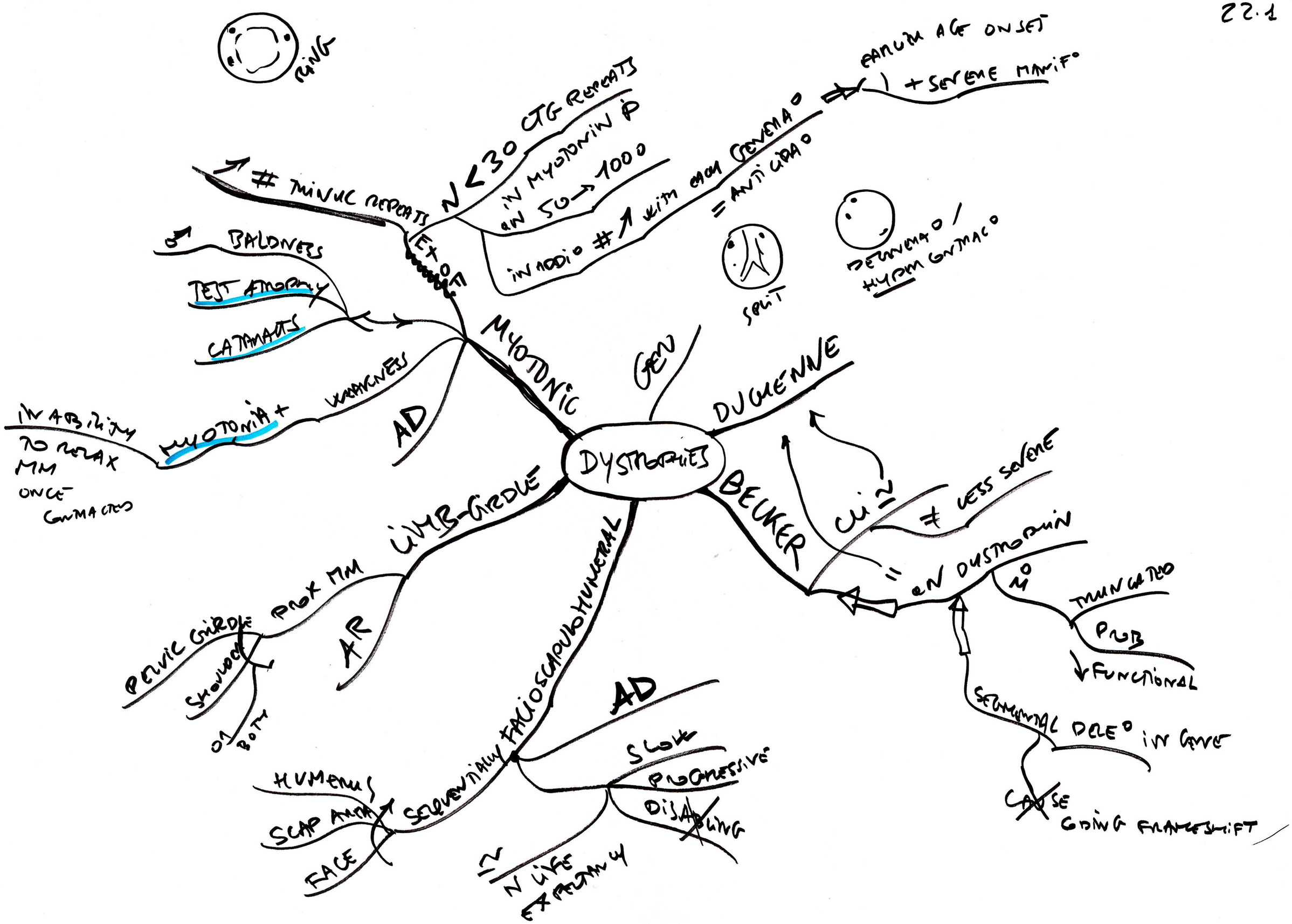
- MAL
- BEN
- GEN
- CHONDROSARC
- OSTEOSARC
  - MOSTCOMMON PRIMAL
- GIANT CI
- OSTEO CHONDROMA = EXOSTOSIS
- ABC
- EWING SARC
- GRAY DIAPH

NICOLASLEVY.NET

SCHNEIDER 2013

NORMAL FIBER
Ḟ = FIBER

TARGET Ḟ
ANGULAR
SMALL
MAY
CROSS-SEC
II
WHITE
I
RED
BOTH Ḟ
AFTER
REINNERVA°
Ḟ TYPE GROUPING = CONSIST Ḟ TO — II- ADJACENT / MAY BE SEEN
≠ GNTMASTS I MIXTURE II INDIVID II IN N
ANGULAR ATROPHY
PRIMARILY II Ḟ
DENERVA°
DIFUSE
REINNERVA° IMMOBILIZA°
LAMBERT-EATON SD
ATROPHIES
PROGRESSIVE DEFICIT
WEAKNESS
FATIGUE
GENET
ACQ
DIFF
AGE ONSET
M GROUPS
FEMALE INVOLV
SEVERE
OTH CONTR
SPEC
CLIN
BIOPSY
NOTH
DYSTROPHIES
SKELETAL MUSCLE
DUCHENNE
↑ FIBRIS
↑ ADIP FIS
PSEUDOHYPERTROPHY
FOLLOWED EVENTUALLY
DISTAL SITES
COMPENSATORY HYPERTROPHY
CALF
MYASTHENIA GRAVIS
CONG MYOPATHIES
SPEC
LAB
HISTO
SEVERE
MOST
COM
NEC → FIBROFATTOSIS
HISTO
INITIALLY
PROX
EOMs
Ḟ
NEC INDIV
SIZE Ḟ
RANDOM VARIATO
X-LINK INHER
1/3 CASES BENOVO MUT°
VARIOUS
MUT°
DOM°
SEVERITY
GENE
CK
↑ SEVERE
↑ TOTAL FAILURE OUTGROWN SYMPTOMS
STOP CODONS
↑ DNA GOING FRAMESHIFT
IN FAM
X 21
DEFICIENCY
DYSTROPHIN
WEAK MUSCLES
PNEUMONIA
MO
BEGINS
WEAKNESS
PROXIMAL
EXTREMITIES
1 YR OF
IMMOBILIZED
WASTING
M CONTRACTURE
EARLY DEATH
NL
SCM


RING
MINIC REPEATS N<30 CTG REPEATS
IN MYOTONIN ↑
ON SO → 100 0
IN ADDIO #1 WITH CLASSIC GENOTYPE
= ANTICIPA°
EARLIER AGE ONSET
+ SEVERE MANIF°
MYOTONIC
EXT°
BALDNESS
TEST ATROPHY
CATARACTS
AD
MYOTONIA +
WEAKNESS
INABILITY TO RELAX MM ONCE CONTRACTED
DYSTROPHIES
GEN
DUCHENNE
BECKER
LIMB-GIRDLE
PELVIC GIRDLE
PROX MM
SHOULDER
OR BOTH
AR
FACIOSCAPULOHUMERAL
SEQUENTIALLY
AD
HUMERUS
SCAP AMEA
FACE
SLOW PROGRESSIVE
DISABLING
N LIFE EXPECTANCY
CK ↑↑
≠ LESS SEVERE
= ON DYSTROPHIN
NO
TRUNCATED
PNB
FUNCTIONAL
SEGMENTAL DELE° IN GENE
CAUSE
GOING FRAMESHIFT
SPLIT
DEFORMA° / HYPERGYNAC°

NMJ

AUTO ACH R

NL

SCM

METABOLIC

MASS

OSTEOPOROSIS

OSTEOMALACIA

RICKETS

PAGET D

= OSTEITIS DEFORMANS

OSTEOPENIA = DIFFUSE RADIOLUCENCY

CHAR USUALLY

MATRIX ↓

IMPAIRED ↑ RESORP°

FRACTURES

STY INADEQUATE FOR WEIGHT BEARING

RADIOLUCENCY

CLI

POSTMENOP

IMMOBILITY

H GONT

H THYR

Ca DEFIC

EST DEFIC PREVENTS CANCER

SHORTENED STATURE SPINAL DEFORMITY KYPHOSIS

VERT

ALKALINE PHOSPHATASE

↑ P

↑ Ca (27)

NYSE

MIMICKING

HYPERPT

↑ PTH

↑ Ca

↓ P

WIDESPREAD OSTEOLYTIC LES

CHAR

MAY MANIFEST "BROWN TUM"

GIANT CELL TUM OF BONE

CYSTIC SPACES

GIANT MULTINUC OSTEOCLASTS

VASC FIBROUS STROMA

OSTEOID + BONE DISORDAO

HEMOR.

SCH

PAR

OCC

BONES

SOFTENING THINNING

CRANIOTABES

LATE CLOSING FONTANELLES

THICKENING OSTEOCHONDROMA

RACHITIC ROSARY

HARRISON GROOVE

PIGEON BREAST

DEFORMITY ALONG LINE INSERT DIAPH INTO RIB CAGE

SHINING BEADS

PROTUSION STERNUM

WEIGHT

SPINAL DEFORMITY

THICKNESS EPIPH PLATES

OTHER SKEL DEFORM

VACUOLATED OSTEID

↓ Ca

CHILDREN

ADULTS

VIT D DEFIC

OSTEOID MATRIX

DIFFUSE RADIOLUC CAN MIMIC

CHAR

WEAK IN

PROXIMAL

CALLUS = RENAL OSTEODYSTROPHY

SOMET DIFFUSE RADIOLUC CAN BE

NL

PAGET D

= OSTEITIS DEFORMANS

CLINICAL

MONOSTOTIC

POLYOSTOTIC

MORPHOPLASIE

OSTEOLYT

MIXED

OB

OC

OC RESORP° > PREDOMINANT

NEW BONE FORMAT°

→ CLINN MOSAIC PATTERN

LATE

BONE DENSITY ↗

TRABECULAE THICK

MOSAIC PATTERN PREDOMINENT

COMPLICA° ☹

BONE PAIN

FRACTURES

ACTIVE OSTEOB THICK

STRENGTH ∅

CAN DEFORMITIES

HIGH OUTPUT ♡ FAILURE

CAN

MC

TIBIA

FEMUR

CALVARIUM

PELVIS

SPINE

ON ARCHIVE

MAY

ALKALINE PHOSPHATASE ↗↗

OB ACTIVITY

Ca ++

P

N

Se

MC ELDERLY

ETIO ?

VIRAL SUGGEST°

OSTEOCLASTS

NUC

ULTRASTRUCTURAL INCLUSIONS

STUDIES SUGGEST° ROLE ?

SLOW VIR PARAMYXOVIR

MEASLES

HEARING LOSS

NARROWING

01 ACOUSTIC FORAMEN

DIL

INVOLVT

MIDDLE EAR

MULTIPLE FUNCTIONAL AV SHUNTS

WITHIN HIGHLY VASC EARLY LES

C

ACTIVITY OSTEOB

OSTEOC

* BOTH

CHARACTERISTIC

NOTE: EXCEPT FOR ITS OCCUR IN PAGET

OSTEOSARC

M.O YOUNGER

~106

plus

NL

SCM

BONE

- KÖHLER BONE D
  - NAVICULAR BONE
- OSGOOD – SCHLATTER D
  - TIBIAL TUBERC
- LEGG-CALVÉ-PERTHES D
  - HEAD FEMUR
- CHAN MAY SITES
- SICKLE CELL ANEMIA
  - DECOMPR D "BENDS"
  - THROMBOSIS
  - EMBOLISM
  - TRAUMA
  - CAN BE
- INTERRUPTED BLD SUPPLY INFANCY
  - ETIO ?
  - MO
  - ASEPTIC NEC
  - AVASC
- IN GROWING CHILDREN
- OSTEOGENESIS IMPERFECTA
- SCURVY
  - VITC ASCORBIC DEFIC
  - VES
    - IMPAIRED OSTEOID MATRIX FORMN
    - FAILURE
      - PRO
      - LYS
      - HYDROXYLN REQUIRED FOR COL
  - MANIF
    - SUBPERIOST HEMOR
      - OFTEN PAINFUL
    - OSTEOPOROSIS
      - METAPH ENDS BONE
    - EPIPH CART REPLACED BY OSTEOID
- ACHONDROPLASIA
  - AD
  - MUTN FGFR3 (FIBROBLAST) 4p 16.3
  - SHORT LIMBS
    - CHAN
    - SIZED HEAD
    - TRUNK
  - + NARROW EPIPH PLATES
  - BONY SCALING ORAL
- ONE OF THE MC CAUSES DWARFISM
- FIBROUS DYSPLASIA
  - POSTNTL BONE IMPLNT
    - FIBTIS
  - ETIO ?
  - TYPES
    - MONOSTOTIC
      - SOLITARY OSTEOM AST
        - CAN
        - SPONT FRAC
        - SUSPICION SCC
    - POLYOSTOTIC
      - MULTIPLE SITES
        - SEVERE
          - DEFORMITY
        - CAN
- ALBRIGHT-MCCUNE-SD
  - POSTZYGOTIC SOMATIC MUTN
  - USUALLY VERY YOUNG ♀
    - GNAS1
      - GNE
      - GP
      - GENETIC BUT OFTEN HANDICAPPY
    - "CAST OF MAINE"
      - SOFT TISSUE
        - INNER BODIES
        - SKIN
    - SHORT STATURE
    - CAFÉ AU LAIT SPOTS
    - PRECOCITY

NL

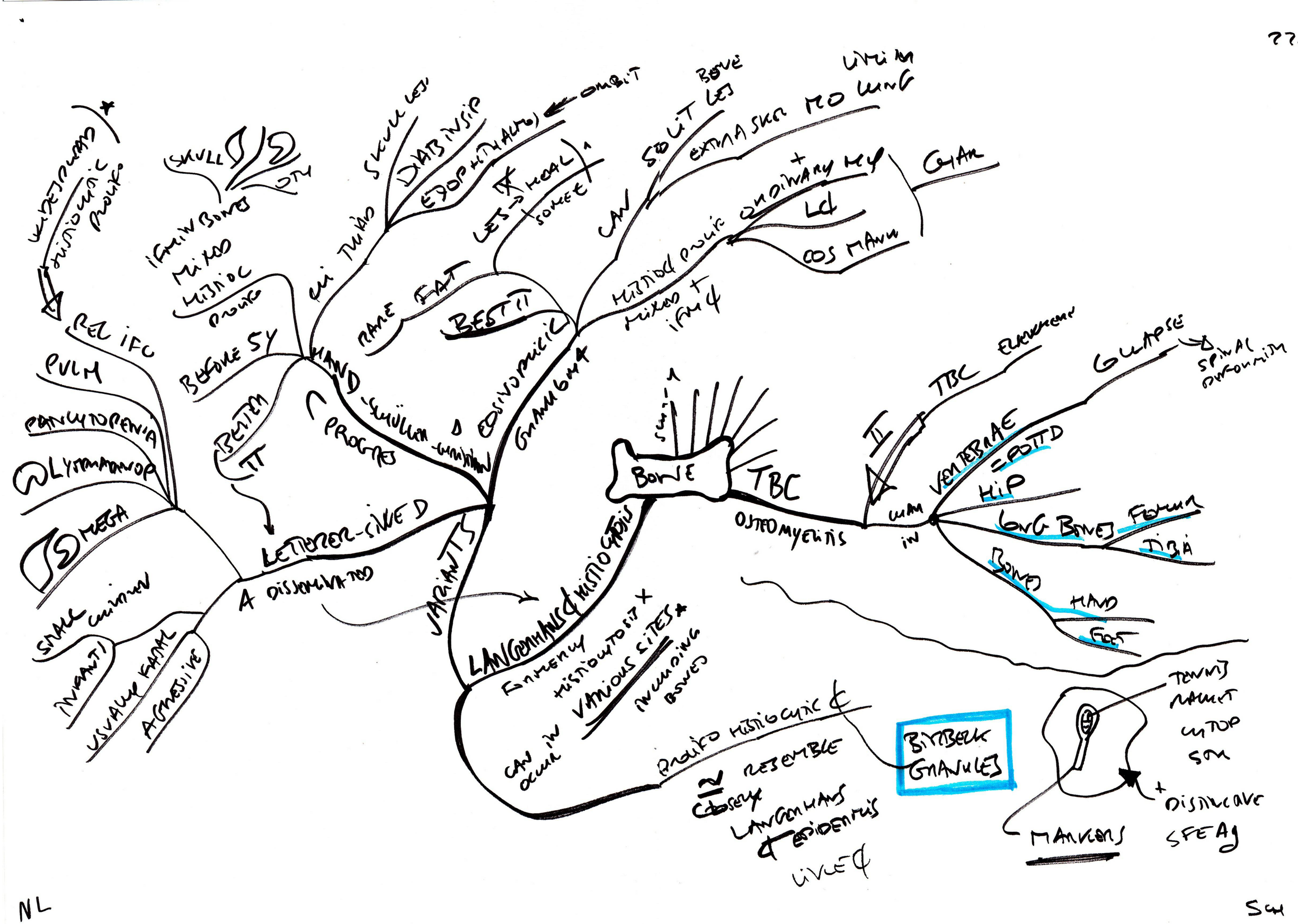
PYOGENIC OSTEOMYELITIS

ETIO

PYOGENIC
- EXUDATE
- VASC
- COMPRESS
- THROMBOSIS
- FOREIGN BODY
- SUBPERIOST
- DISSECT
- BONE MARROW
- IFC
- NEC BONE
- SEQUESTRUM
- MAY IMPAIR BS SUPPLY
- SURROUND NEW BONE FORMED = INVOLUCRUM
- MAY BE LOC'D BY SURROUNDING SMALL GRANTS = BRODIE ABSCESS
- LOSS OF PERIOSTEAL IFC
- MAY BE SCLEROTIC SURROUNDING
- MULTIPLE FUNCTIONAL = BRITTLE BONE D
- TRAUMA
- FRACTURES
- ATHS RUPTURE SURROUNDING TIS → SINUS DRAINING SKIN
- ANTIBIOT
- MC
- HUM
- TIBIA PROXIMAL
- FEMUR DISTAL
- PROMP
- INITIALLY
- HO
- PYOGENIC AIFC
- CHAR
- IV DRUG USERS
- PREDISPOSING
- ADULTS
- USUALLY COMPOUND FRAC
- CHILDREN
- RESULT BS-BONE IFC
- SPREADS
- S. aureus MC*
- BB SMOP
- E. coli
- FRAG
- NEW BONES
- (ES) severe
- AD
- AR
- USUALLY FATAL IN INFANCY
- FORMS
- CN
- INVOLVE
- SCOLIOSIS
- KYPHOSIS
- SEVERE
- ANEMIA
- NEONATAL
- FORMATIVE
- IMPINGEMENT
- NARROWED
- NARROW SPACE
- ANEMIA
- MULTIPLE FRAC
- OSTEOPETROSIS
- MARROW SPACE
- IMPAIR
- DENSITY
- SKEL
- OSTEOC
- ACTIVITY FAILURE
- BONE MARROW
- FIB DYSPLAS
- ASEP NEC
- AVASC
- OSTEOGENESIS IMPERFECTA
- GROUP
- SPEC GENE MUTN
- DEFECTIVE
- COLL
- COLL CONNECTION TISSUE
- SKIN
- EYES
- BONES
- OFTEN PRESENT
- BLUE SCLERA
- TRANSLUCENCY
- THIN GN TIS OVERLYING CHOROID
- CLIN
- MC TYPE AD
- MULTIPLE CHILDHOOD FRAC
- PROMIN

NL

SCH


SKULL
IGM in BONES
MIXED
MIXED
PROG
EOS TUMOR
SKULL LES
DIABINSIP
EXOPHTHALMOS
OMBIT
LES → MEDIAL SCLERA
PAINFAT
BESTII
CAN
SOLIT LES
BONE
EXTRASKEL
MO LUNG
MIXED PROG
INFLAM
CHRONIC MY
LCH
EOS MAN
GIAN
REL IFC
PULM
BENIGN SY
BENIGN TT
PANCYTOPENIA
LYMPHADENOP
SPLENOMEGA
SMALL CHILDREN
INVASIVE
VISUAL HALL
AGGRESSIVE
LETHERGIC-LIKE D
A DISSEMINATED
HAND-SYSTEMIC EOSINOPHILIC GRANULOM
PROGRESS
JAUNDICE
LANGERHANS HISTIOCYTOSIS
FAMILY
HISTIOCYTOSIS
VARIOUS SITES
INVOLVING BONES
CAN OCCUR IN
BONE
SWELL
TBC
OSTEOMYELITIS
II
TBC ELEMENT
COLLAPSE
SPINAL INVOLVEMENT
VERTEBRAE
=POTD
HIP
CAN IN
LONG BONES
FEMUR
TIBIA
BONES
HAND
FOOT
RADIO HISTIOCYTIC &
RESEMBLE
CLOSELY
LANGERHANS
& RESIDENTIS
LIVER
BIRBECK GRANULES
TENNIS RACKET CYTOPLASM
+
DISTINCT SFEAG
MARKERS

NL

SCM

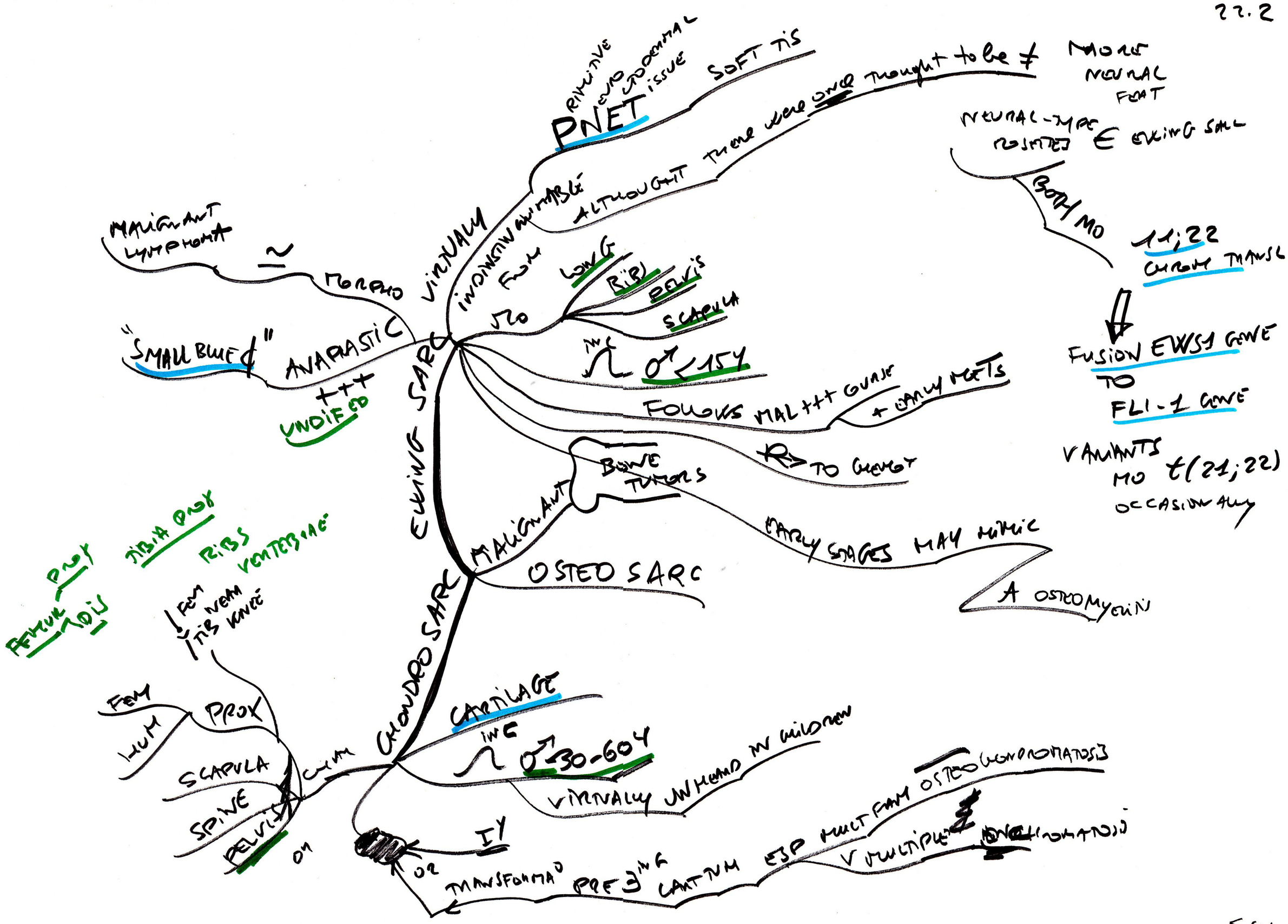
BONE TUMORS

BEN

- ABC
  - EPIP END LONG
  - > 50% AROUND KNEE
  - LOWER END FEM > UPPER END TIB
  - LOC = AGGRESSIVE OSTEOLYTIC RECURR COMMON
  - DIA METAPHYSIS EPI
  - LONG LOWER END FEMUR / UPPER END TIBIA / FAVORITE LOC
  - NONOSSIFYING FIBROMA
  - "SOAP BUBBLE" RADIO
  - ABC ONE YST
  - II Y
  - MAY
  - BEN PROCESS ↓ SOLA O OR ↔ OTH TUM
  - FOR MAG
  - SOMEWHAT ♀ > ♂
  - 20-60 Y
  - SURG CURE I° OCCULT TUM
  - FOLLOWED
  - DVPT OSTEOSARC ?
  - RESPONDED WELL SW
  - Y 13
- HAMARTOMA
  - MAYBE
  - ♂ < 25 Y
  - CAP CART PROJECTING FROM SFE
  - CART-CAPPED SUBARTICULAR BONY PROJECT FROM GIANT SFE
- OSTEOCHONDROMA
  - MC BEN
  - EXOSTOSIS
  - POST FUSE
  - ENCHONDROMA
    - IN HAND
    - FIB STROMA
    - MULTIPLE GIANT ¢
    - IN LONG TUB
    - SPINDLE
    - MONOSTOTIC OVAL
    - MORE HER VARIANT MULTIPLES
    - MULT FAM OSTEOCHONDROMATOSIS
  - CHONDROSARC
    - RARE → PEAL + FUSE
    - RARE
- OSTEOMA
  - OSTEOID OSTEOMA
    - INTRAMED / HAMMY FEETS / SPINAL AGE SCOLIOSIS
    - DENSE ♂ MATURE
    - OSTEOMYELITIS / NEAR END DIAP FEM TIB ♂ < 25
    - SKULL + FACIAL OFTEN PROTRUDES INTO PARANAS SIN ♂
    - WITHIN MEDULLA
  - OSTEOBLASTOMA

BONE TUMORS

- FIBROUS DYSPLASIA
  - MONO
  - POLY
  - JUVENILE
  - LONG
  - ♂ < 25
  - PROX FEMUR TIB
  - AROUND KNEE
  - NOT DIS PROX FEM
  - PREFERRED SITES
  - USUALLY ENDOST
  - OSTEOID OSTEOMA ++
  - NOT OBVIOUS
  - VARIANTS
    - OSTEOBLASTIC
    - CHONDROBLASTIC
    - CART MATRIX
    - MAY RESEMBLE SCLEROSING BONY DIS
    - VIRTUALLY ALWAYS SEEN IN PEDIAT
    - MM = MULTIPLE MYELOMA SCH
    - VITAL CART-FORMING
    - CHILDREN INVARIABLY
    - REPRESENT RATHER THAN GROWTH
    - HISTO
    - FIBROBLASTIC
    - MAY EASILY MISDIAGNOSE FOR MALIGN PROCESS
    - A VICE VERSA
- OSTEOSARC
  - MC I Y MAL
  - ♂ 10-20 Y
  - METS GA MM
  - MORE COMMON THAN I Y MAL
  - PREDISPF
    - PAGET'D
    - FIBROUS DYSPLASIA
    - CHONDROMA
    - OSTEOCHONDROMA
    - IR
    - BONE INFARCTS
    - FAM RETINOBLASTOMA
  - LIFTING PERIOST BY EXPAND TUM
    - 2X → 3X
    - ALK@PHOS
    - CLI
    - OCCAS FNAC
    - PAIN SUGGESTIVE
    - SPICULATED "SUNBURST" PAT G
    - ARTOM RATIO
    - CODMAN TRIANGLE
    - GIAN RADIO
    - SPIEGEL LYEN LUNGS
    - MEMAT
    - SPRAD
    - EARLY
- EWINGSARC MAL


PNET
RIVETING
NEUROEPITHELIAL
ISSUE
SOFT TIS
ALTHOUGH THEME WERE ONCE THOUGHT TO BE ≠
MORE NEURAL FEAT
NEURAL-TYPE ROSETTES ∈ EWING SARC
BOTH MO
11;22
CHROM TRANSL
FUSION EWS1 GENE TO FLI-1 GENE
VARIANTS MO t(21;22)
OCCASIONALLY
VIRTUALLY INDISTINGUISHABLE FROM
LONG
RIB
PELVIS
SCAPULA
INC
↗ 15Y
FOLLOWS MAL ††† COURSE + OFTEN METS
TO LUNGS
EWING SARC
MALIGNANT LYMPHOMA
≃
MORPHO
"SMALL BLUE ¢"
ANAPLASTIC
†††
UNDIFD
BONE TUMORS
MALIGNANT
OSTEOSARC
EARLY STAGES MAY MIMIC
A OSTEOMYELITIS
PREF
TIBIA DIST
RIBS
VERTEBRAE
FEMUR
TIB
FEM
TIB NEAR KNEE
CHONDROSARC
FEM
HUM
PROX
SCAPULA
SPINE
PELVIS
CHIN
CARTILAGE
INC
↗ 30-60Y
VIRTUALLY UNHEARD IN CHILDREN
01
02
IY
TRANSFORMED
PREEXISTING
CARTILAGE
ESP MULTIPLE
V MULTIPLE
OSTEOCHONDROMATOSIS

NL

SCM

22.3

CYSTS
NO

SUBCHOND
BONE

OFTEN ANT CART

GRAN°TIS

EVENTUATE INTO NUMEROUS FIBRO LIKE KILLI

= PANNUS

SYNOV LINING

HYPERPLAS 1

THICKN

DEFINITIVE IRM LIC TENO BURSAE

SCARRING CONTRACTURE

SUBCUT + R NODULES

1/3 PATIENTS

ENTIR

GENET

INTERPLAY +

AUTOIMM

LIKELY

SYNOVITIS

20-50Y O♂/♀

SYNOV

Ci

PROGRE°

IFMY

INFILTRATE

AI REAC°

EARLY RA

EDEMA

+

DEFORMITY

BONE CART

PG

MORPHO

Ci COURSE

RA

VARIANTS

SE

RF HUMANIZED

USEFUL △

9/11 Ig M

M

= ANTI IgG FC SPECIFICITY

OFTEN ASSOC BY

ANOTHER MARKERS

RELENT 9/13 GREMY

ANTI-CCP

HIGH SPECIFIC

CHART++ SPECIFIC ★

⊕ve 70%

★EARLY RA

MO HLA-DR4 ⊕ve

EPISODIC

EXTRA ARTIC

PULM

NEURO

JOINT INVOLV

POLYART

SYMMETRIC

INTENSITY

MORNING STIFFNESS

FATIGUE MALAISE

ANOREXIA WEIGHT↓

FEV MYALGIA

SWELLING JOINTS

PROX INTERPHAL METACARPO PHAL

ULNAR DEVIA FINGERS

KNEES FEET HANDS

FREQ

SYNOVITIS LIGAMENTS

MINIMAL RADIAL DEVIA°

MAY OCCUR

WRIST

PERIC

PLEUR

ANEMIC CD

EXCESS

VASCULITIS

LYMPHOADENOP

SJÖGREN'S

FELTY SD

SPLENO +RA

NEUTROPENIA

RA

OMEGA

STILL D = JUVENILE

VACCINATIONS PREVENTED BY

OMEGA

GEN LYMPHADENOP

FEVER

ONSET ★

PROB AUTOIMM

NEGATIVE

SERONEGATIVE

= SPONDYLOARTHROPATHIES

GENET GMP YOUNG ♂

CHAR

ØRF

SACROILIITIS

PARTNERS

INC +++

HLA B27

ANKYLOSING SPONDYLITIS

ASYMETRIC

SACRO-ILIAC JOINT

SPINE

98%

STIFFENING

CAN

ANT is CONJUNC IS URETHRITIS

IFC (INTES)

WOMEN

REITER SD

10% PSORIATIC + IBD

TYP

PART is

ANK SPONDY

CROHN UC

IBD OVER

BOWEL FUSION = ANKYLOSIS

NL

SCH

OSTEOARTHRITIS

TYPES

- PROXIMAL —
  - OSTEOP AT DISTAL INTERPHAL JOINTS FINGERS
  - ↑ FLOATING INTO SF
  - OSTEOPHYTES FRACTURING
  - SUBCHOND BONE
    - EROSION overlying CART
    - EBURNA°
    - IVORY-LIKE POLISHED BONE
  - CYSTIC CHANGE
  - ↑ FLOAT INTO SYN FLUID
    - SEPARATE ITEM
    - FRAGMENTS
      - CART VARIABILITY
        - PITTING
        - FRAYING
  - OSTEOPHYTES
    - "BONY JOINT"
    - ↑ DENSITY SUBCHOND TS
    - NEW BONE FORMA°
  - SUBCHOND BONE
  - ↑ FLOATING INTO SF
  - ALIGN + CANT
  - = JOINT MICE
  - ANT SFE
  - ATT
  - PERIPHERY
  - POINTS LIG TS ATTACHMENT
  - FORMA°
- DISTAL —
  - HEBERDEN NODES
  - BOUCHARD NODES
  - MORPHO
- CAUSE?
- I INTERPLAY
  - GENET PREDISP
  - MEC
  - INFLAM
  - MEC
  - + TRAUMA
- II
  - KNOWN MECHANISM
    - MECHANICAL
    - METABOLIC
    - CHRONOSIS
    - IFM
- III
  - IFM
    - i
    - ii
    - iii
    - C
  - CURE
    - RESTORATION°
    - ANT CART
    - + NEW BONE FORMA°
    - SUBCHOND AND MARGINS
    - AFFECTED JOINT
- = DEGENERATIVE
  - MOST COMMON FORM OF ARTHRITIS
- MO RELATED
  - GENETIC COMPONENT?
  - INJURY
  - MECHAN TRAUMA
  - "WEAR-&-TEARS"
  - CART BALANCING DOWN
- - WEIGHT BEARING JOINTS
  - DIS 1 PROX INTERPHAL —
  - SOMEWHAT
- INCIDENCE ↑ WITH AGE
- ↑ BEGINNING AFTER 50Y
- MUSCLE ATROPHY
- BONE REMODEL 1 SCLEROSIS
- CART BEGIN BREAK DOWN
- MENISCAL DAM
- SYN HYPERTROPH
- OSTEOPHYTES
- LIG DYSFO
- ACTIVITY AT ART

NL

SCM

OVER PRODUC°

↗ Bd AUBURIC

UNDER EXCRE°

♂ >30Y

CLIN ACUTE LOCAL° = PODAGRA

PHAGD

PHAG

PROTEOLYTIC ENZ

ION MISMATCHES

CRIST OPSONIZA°

IFN G

IFN REAC°

ARTHRITIS

BURSITIS

PAIN+++

HYPERURICEMIA

JOINTS

ESPEC

MULTIPLE SEVERAL SITES

DEPOSI° URATE CRYSTALS

TIS

MODIFIED METATARSOPHAL JOINT GREAT TOE

HYPER URICEMIA

PRECIPITATED ETIOLOGY°

LEUKO+

ALC+

EVENTUALLY

NODULAR TOPHI

AROUND JOINTS

BAM

HELIX

ANTIHELIX

ACHILLES TENDON

OTH

URATE CRYSTALS +IN PMNMIX

SURROUNDED BY FIB GN TIS

FOR BOD GIANT CELL REAC°

GOUT

ARTHRITIDES

COMA

CLINICAL SYNDROM

SYNOVITIS

MYNOVIA

I

II

III

IV

METABOLIC ORIGIN

MULTIPLE LESIONS GN

MOST GN

CHONDRO CALCINOSIS

PSEUDOGOUT

RHOMBOID

CLI

CRYSTALS

2N GOUT

CA PYRO DIHYDRATE CRYST

DEPOS°

IFN CART

SELF

+SEVERE NEURO

VARIOUS DRUGS

↑ TURNOVER

CRENAL

URATE ETC°

MYELOPROLIFSDs

MM

LEUKEMIA

NL

LESCH-NYHAN SD

XLINKED

HGPRT DEFIC

+EVIDENT CAUSE

FAMILIAL FAM PREDISPO°

MIDDLE AGE ♂

SIMILAR DIF

HYPER URICEMIA

ØEVIDENT CAUSE

VERY BIREFRINGENT

NEEDLE SHAPED

UNDER POLARIZED LIGHT

OR

TOPHACEOUS DEPOSITS

BIOPSY

HYPERURICEMIA

UC

IN SYN FLUID

INTERS DEPOSI°

UC

↑ OBSTRUC°

COL TUB

RX UC

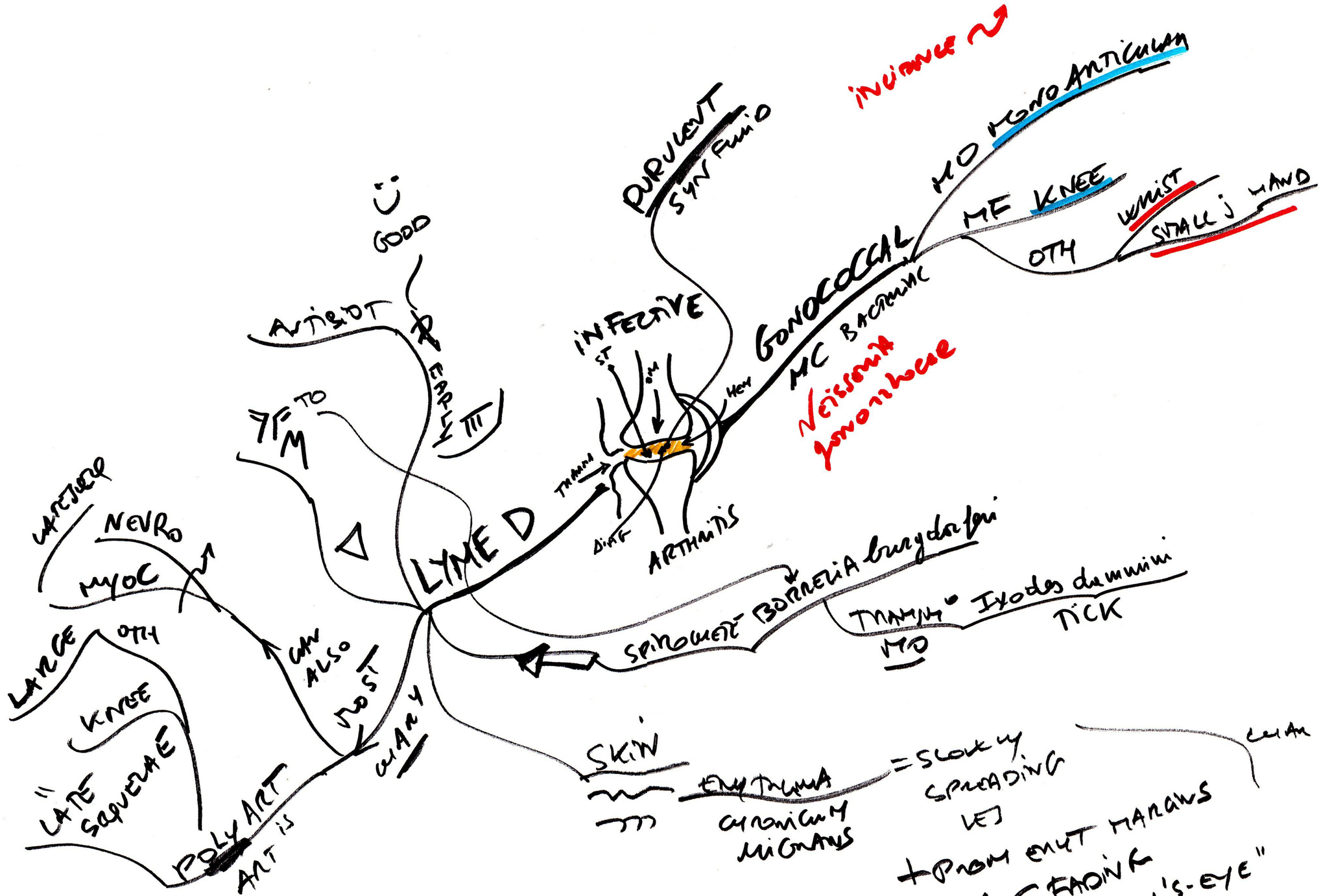
↑ FORMA°

UC ↑ Ca STONES

NEPHROLITHIASIS

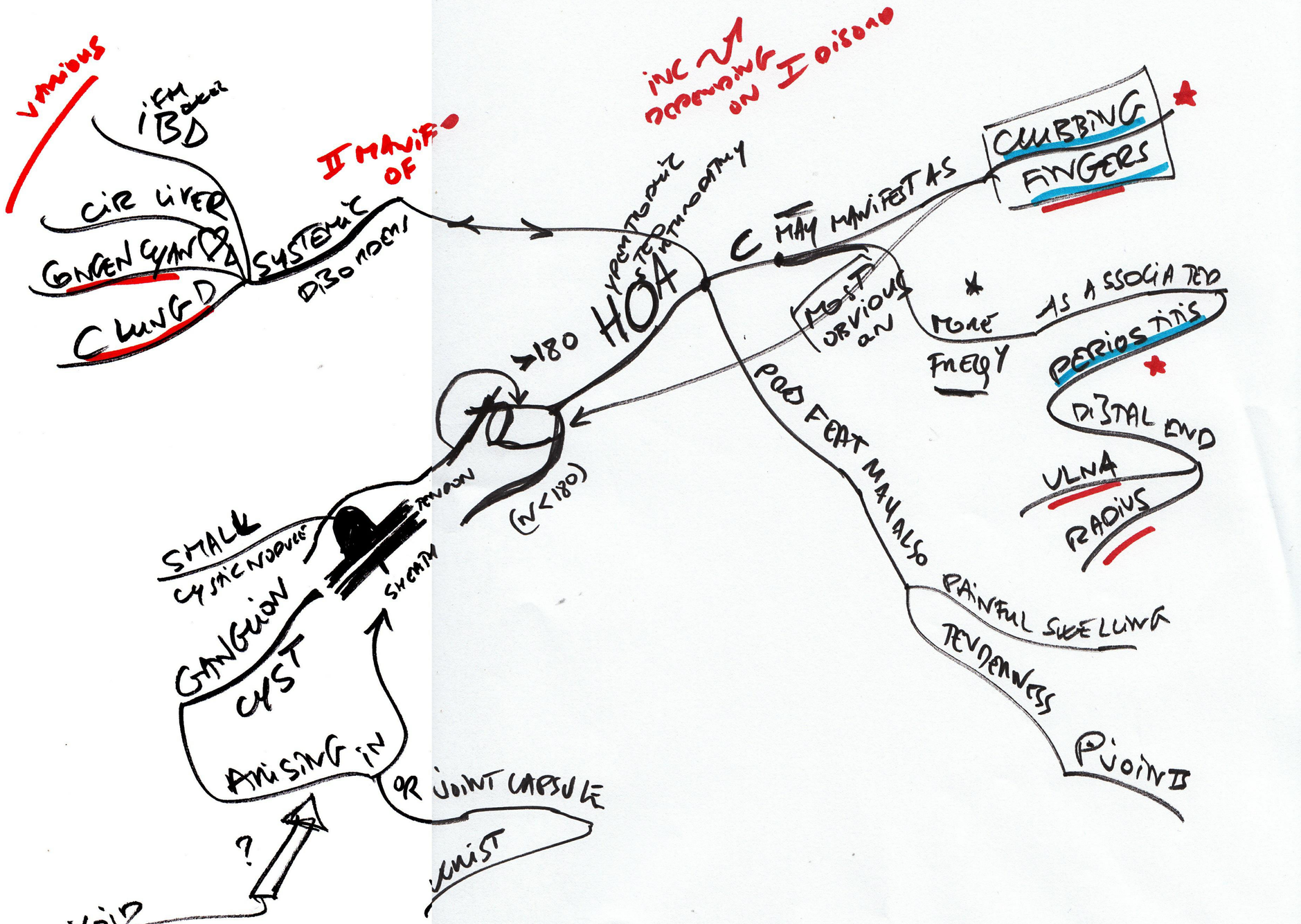
URATE NEPHROPATHY

SCH


PURULENT
SYN FLUID
INCIDENCE ↘
MO MONO ARTICULAR
MF KNEE
OTH
WRIST
SMALL J HAND
GONOCCCAL
MC BACTERIAL
Neisseria gonorrhoeae
INFECTIVE
ST
DM
HOW
TRAUMA
DIAG
ARTHRITIS
LYME D
SPIROCHETE BORRELIA burgdorferi
TRAUMA
MTD
Ixodes dammini
TICK
SKIN
ERYTHEMA
CHRONICUM
MIGRANS
= SLOWLY
SPREADING
LESION
+ FROM ONSET MONTHS
↓ FADING
"BULL'S-EYE"
CHRONIC
ARTHRITIS
ACUTE
ARTHRITIS
NEURO
MYOC
LATE
OTH
KNEE
"LATE
SEQUELAE"
CAN ALSO
MOST
MANY
POLYART
ART IS
TO
M
EARLY
III
ACUTE
ARTHRITIS
GOOD
RESPONSE
TO
ANTIBIOTICS

NL

SCH


VARIOUS
IBD
CIR LIVER
GANGLIONIC CYST
SYSTEMIC DISORDERS
MANIF OF
INC VI DEPOSING ON
HYPERTROPHIC SYNOVITIS
MAY MANIFEST AS
CLUBBING FINGERS
>180 HOA
(N<180)
MOST OBVIOUS ON
MORE FREQ Y
AS ASSOCIATED
PERIOSTITIS
DISTAL END
ULNA
RADIUS
PAINFUL SWELLING
TENDERNESS
POINTS
SMALL
SYNOVIAL
GANGLION CYST
ARISING IN
OR JOINT CAPSULE
SYNOVIUM
?
MYXOID DEGEN CONTIS

NL

5cm

SOFT TISSUE TUMORS

GEN

MO REQUIRES

- SKEL M
- ADIP
- JOINT TIS
- FIBROUS CON
- DNS

ΔADJUNCTS

- SPEC STAINS
- eM
- IMMUNO
  - HISTOCHEM
  - CYTOKERATIN
  - VIMENTIN
  - DESMIN
  - S100
- MC USED

EX

MC

- SCT
- MAY ARISE IN OTH SOFT TIS
- VARIANTS
  - PLEOMORPHIC
  - EMBRYONAL
  - ALVEOLAR

RHABDOMYOSARC

- MC STSARC OF II
- SKEL M
- ##

SYNOVIAL SARC

- X;18 TRANSLOCA
  - INVARIABLY PRESENT
  - NO ASSAY NOT ENTIRELY SPEC FOR SS
- MAL ++
- MOL
  - TIS ADJACENT TO JOINT
  - RATHER THAN CAVITY
- POORLY NAMED
  - NO ETIO
  - VARIANT
- R TO SYNOVIUM

LOCAL EXT

- BIPHASIC
  - GLAND PATTERN
  - SPINDLE
  - EPIT
- MAY DEMONSTRATE OPTIONS
- BIPHASIC
- SPINDLED
  - GMP
- ϕ OBVIOUS EPIT GLANDS
- OR MONOPHASIC

FIBROSARC

- MAL
  - PREVIOUSLY TERMED "MAL FIB HIST"
  - OLDER
    - LINEAGE
    - DIFO
    - EVIDENCE
    - ϕ
  - MC
  - UNDIF ED
  - SPECIFIC PLEOMORPHIC SARC
- FIBROBLASTS
- SPINDLED
- HERRING BONE PATTERN
- BEN
- MYXOID
- MC STT

LIPOMA

- MAL
- ADIP
- LIPOSARC

FIBROUS HISTIOCYTOMA

- HISTIO ϕ
- FIBROBLASTS
- MIXTURE
- BEN

NL

SCH