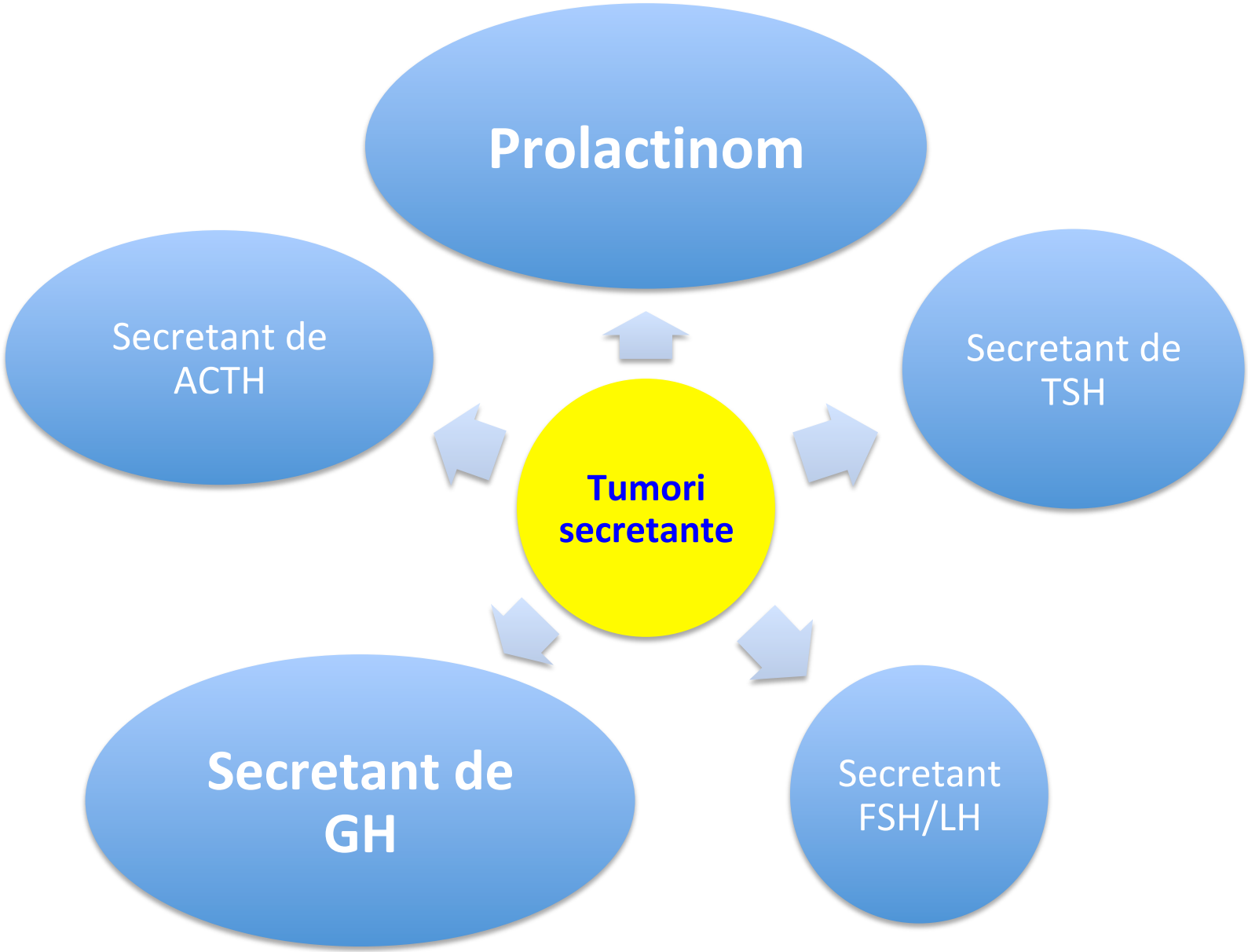
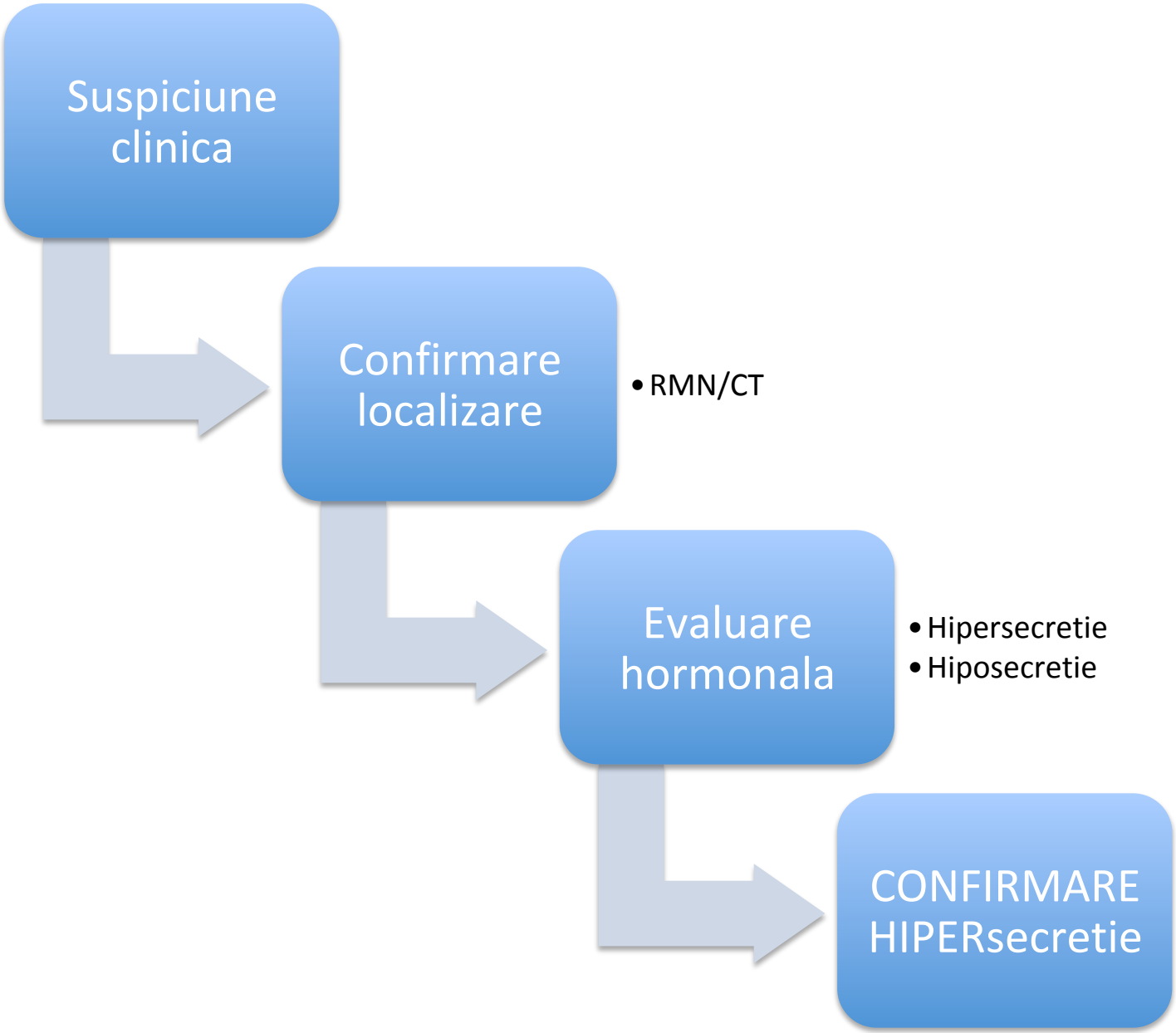
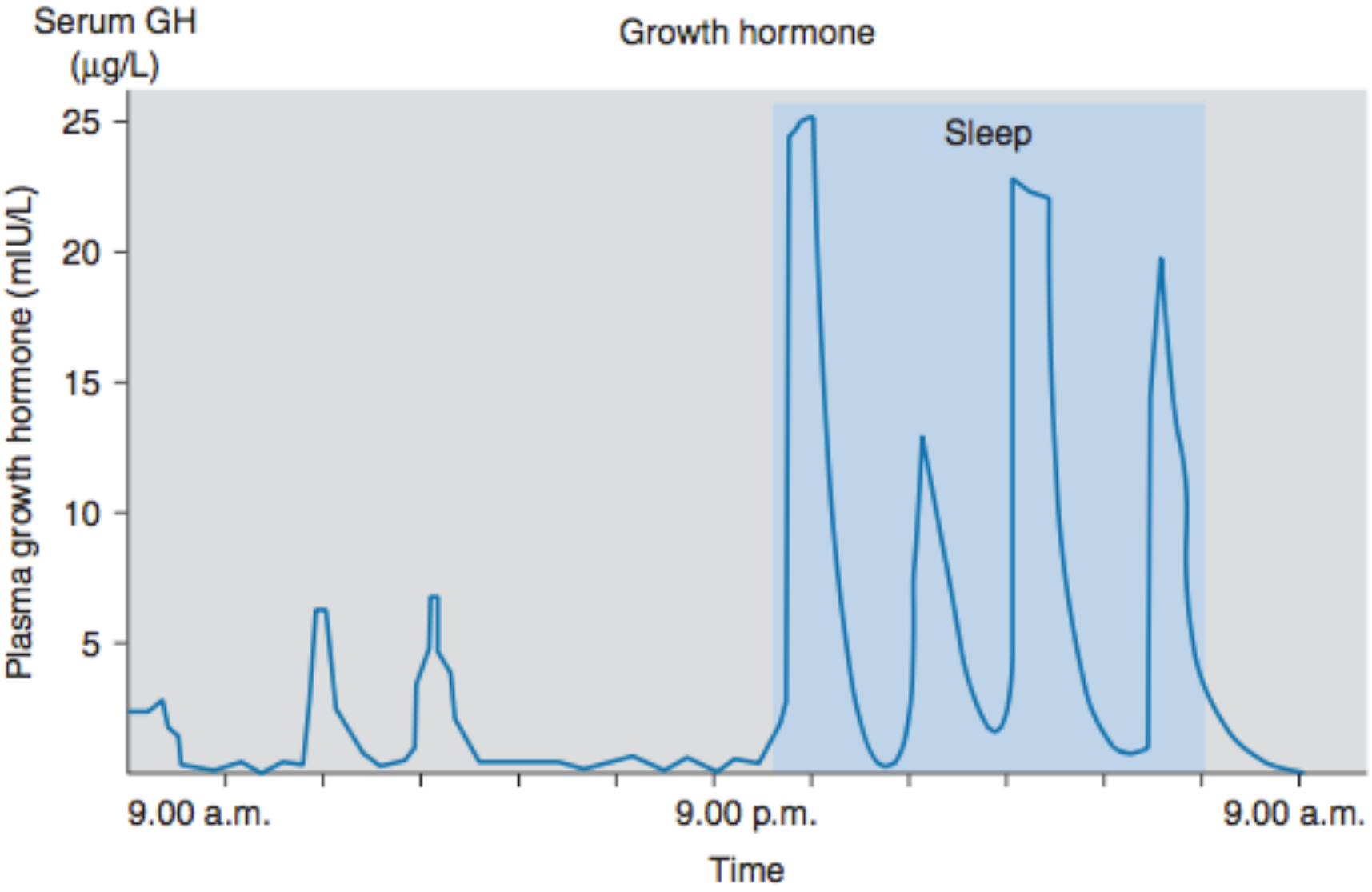

Prolactinom
Secretant de ACTH
Secretant de TSH
Tumori secretante
Secretant de GH
Secretant FSH/LH


Suspiciune clinica
Confirmare localizare
• RMN/CT
Evaluare hormonala
• Hipersecretie
• Hiposecretie
CONFIRMARE HIPERsecretie

GH


Serum GH
(µg/L)
Growth hormone
Sleep
25
20
15
10
5
Plasma growth hormone (mIU/L)
9.00 a.m.
9.00 p.m.
9.00 a.m.
Time

CUM

?

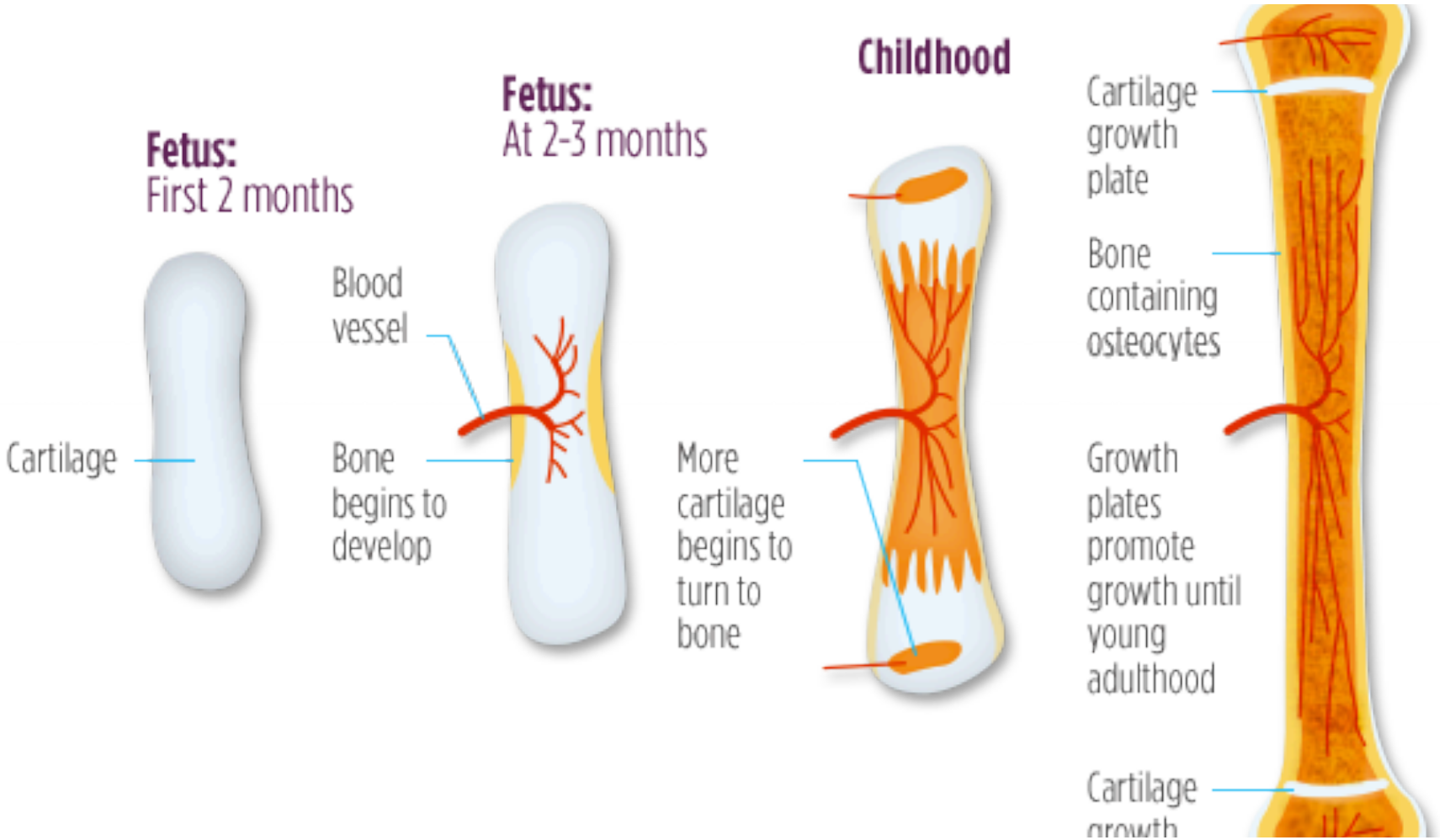
DIRECTE

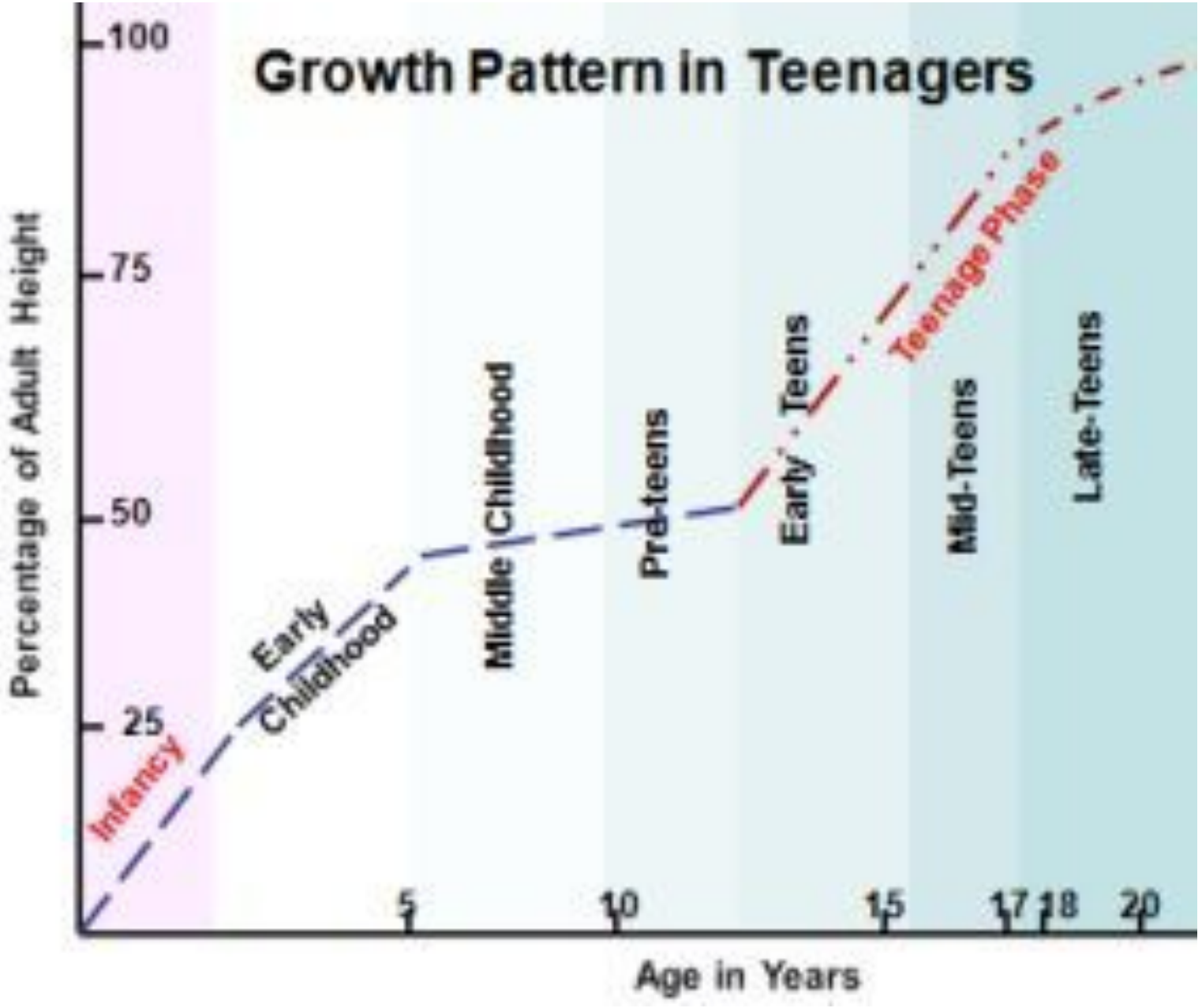
- lipoliza
- transport AA intratisular
- gluconeogeneza
- crestere cartilaje

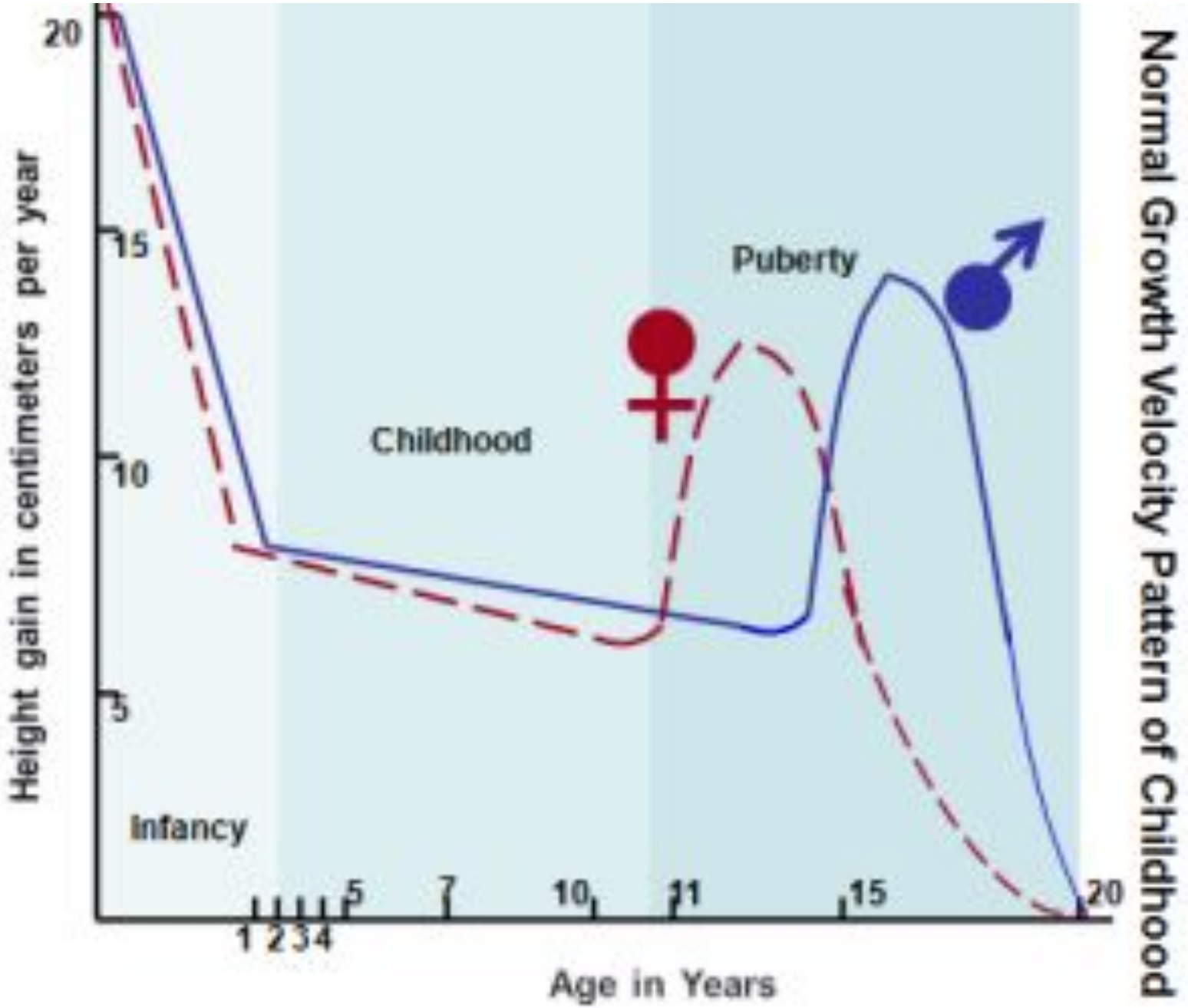
mediate **IGF1**

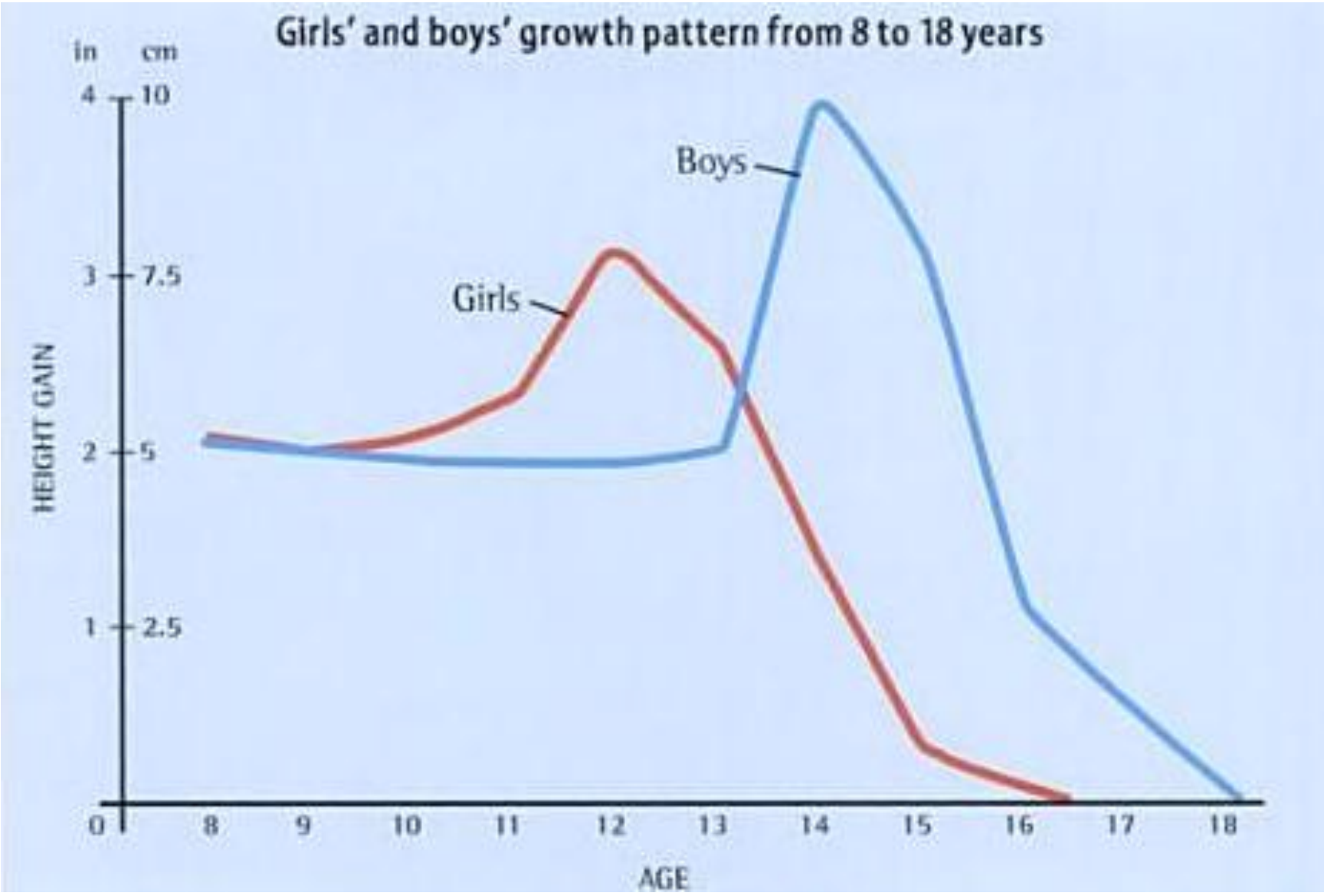
Proteina sintetizata HEPACTIC

- formare osoasa
- sinteza proteica
- uptake glucoza muscular
- supravietuire neuronala
- sinteza mielina
- inhiba degradarea proteica


Fetus:
First 2 months
Cartilage
Fetus:
At 2-3 months
Blood vessel
Bone begins to develop
Childhood
More cartilage begins to turn to bone
Cartilage growth plate
Bone containing osteocytes
Growth plates promote growth until young adulthood
Cartilage


Growth Pattern in Teenagers
Percentage of Adult Height
100
75
50
25
Infancy
Early Childhood
Middle Childhood
Pre-teens
Early Teens
Mid-Teens
Late-Teens
Teenage Phase
5
10
15
17
18
20
Age in Years


Normal Growth Velocity Pattern of Childhood
Height gain in centimeters per year
20
15
10
5
Infancy
Childhood
Puberty
1 2 3 4
5
7
10
11
15
20
Age in Years


Girls' and boys' growth pattern from 8 to 18 years
in
cm
4
10
3
7.5
2
5
1
2.5
0
HEIGHT GAIN
Boys
Girls
8
9
10
11
12
13
14
15
16
17
18
AGE

HIPERSOMATOTROPIA = Exces de GH

- Adenom hipofizar
- Proliferare celule acidofile mutante (GH±PRL)

= Mutatie somatica prot G – avantaj proliferativ

- HIPERSECRETIE de GH ➔IGF1

- 100% macroadenoame (diametru de> 1 cm)

- 86-130/1 milion persoane

EXCES DE GH

- Secretie crescuta de GH
- Cresterea amplitudinii + pulsurilor GH **ALEATORII**
- Alterarea controlului dinamic
- Raspuns anormal la teste de **INHIBITIE**

- ..... Sinteza anormala ↑↑↑↑↑↑ de IGF


Billy Crystal
A comedy of incredible proportions.
My GIANT

?

SOMATIC — **sd morfologic**
= cresterea organelor

METABOLIC — **sd metabolic**
= urmari metabolice

HORMONAL — **sd endocrin**
= insuficienta celorlalti tropi

TUMORAL — **sd functional**
= sd tumoral hipofizar

Rar in copilarie
Frecvent adult: F=B, > 40 de ani, vechime minim 5 - 10 ani

Sd Morfologic INAINTE inchidere cartilaje crestere

Simptome

- Trasaturi dure
- Secundare metabolice

Semne

- Talie peste media varstei
- Viteza de crestere foarte mare
- Varsta osoasa accelerata
- Crestere parti moi

  Palme

  Plante

  Degete groase


A
B
C

Dg ≠ clinic gigantism

1. Statura inalta constitutional
2. Statura inalta genetic
3. Sd Marfan
4. Gigantism cerebral
5. Sd Klinefeter
6. XYY, XYYY
7. Pubertati precoce


eview: Shrek 2 | Tor.com


AP / Everett Collection

Sd morfologic DUPA inchidere cartilaje creste

Simptome

- Dureri osteoarticulare
- Parestezii
- Transpiratii excesive
- Intoleranta la caldura
- Letargie/oboseala
- Oligomenoree
- Galactoree
- Disfunctie erectila
- Infertilitate

- Cefalee
- Fotofobie

Semne

- Proliferare parti moi 100%
  buze,limba, urechi, nas
- Crestere oase spongioase 100%
  - Palme
  - Plante
  - Facies = bose temporale
  - Ingrosare calvarium
  - prognatism
- Hiperhidroza 88%
- Crestere ponderala 87%
- Papiloame 45%
- Hipertricoza
- Gusa 30%
- Acanthosis nigricans 30%
- HTA 24%
- Cardiomegalie 16%

1977

1981

1983

1988

(a) Age 9

(b) Age 16

(c) Age 33

(d) Age 52

Sd metabolic

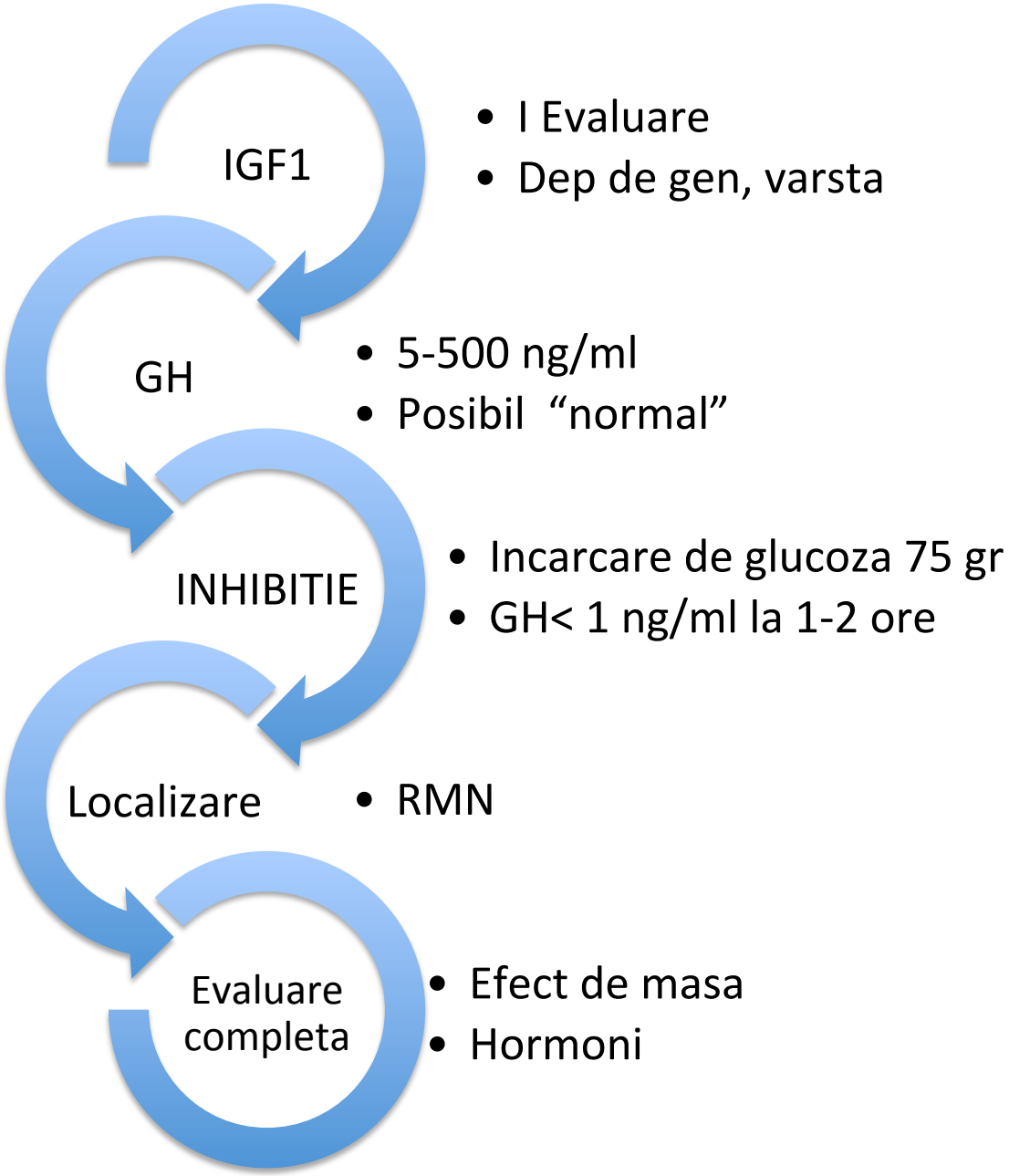
- Hiperglicemie (70%) → ATG (50%) →DZ

Sd endocrinologic

- Insuficienta alti tropi hipofizari
  - Hipogonadism 60%
  - Hipotiroidism 13%
  - Hipocorticotropism 4%

Sd functional = sd tumoral hipofizar

- Compresiune structuri invecinate +


IGF1
• I Evaluare
• Dep de gen, varsta
GH
• 5-500 ng/ml
• Posibil “normal”
INHIBITIE
• Incarcare de glucoza 75 gr
• GH< 1 ng/ml la 1-2 ore
Localizare
• RMN
Evaluare completa
• Efect de masa
• Hormoni

TEST DE INHIBITIE

- Recoltare initiala
  - Glicemie
  - IGF1
  - GH

- Administrare 75/100 grame glucoza
- Repetare recoltare la 60’/120’ analize

NOVA**TEST**
0215 277 909

VOUCHER ANALIZE
ACROMEGALIE

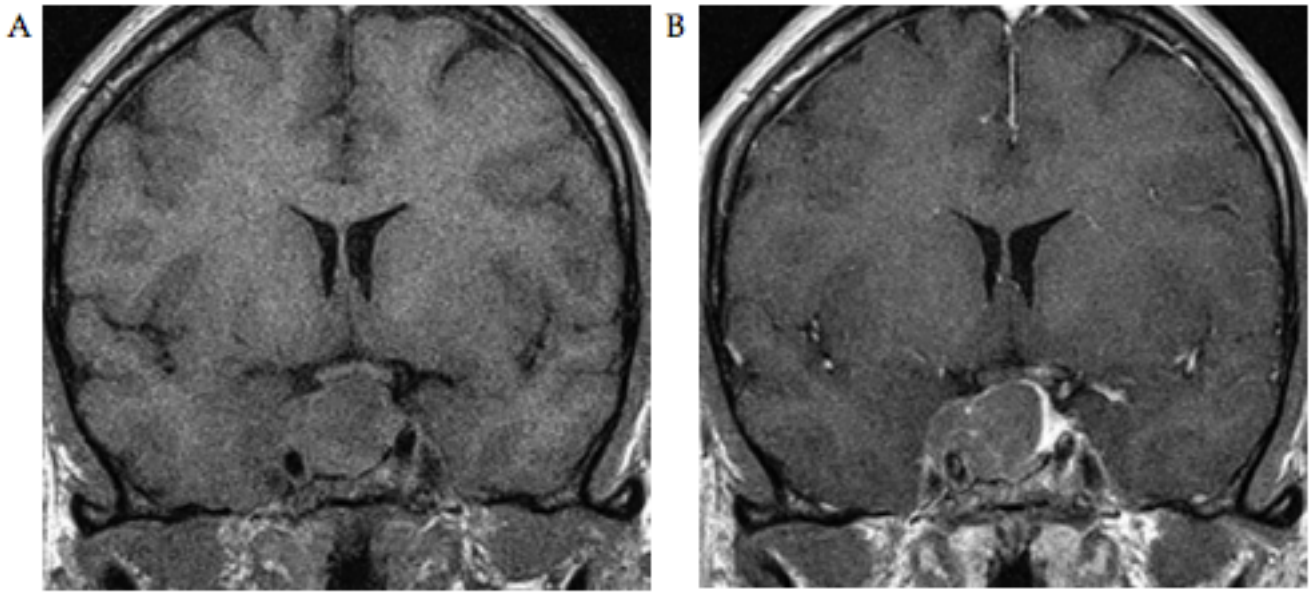
SERIA: 2017B00509
EXEMPLAR MEDIC

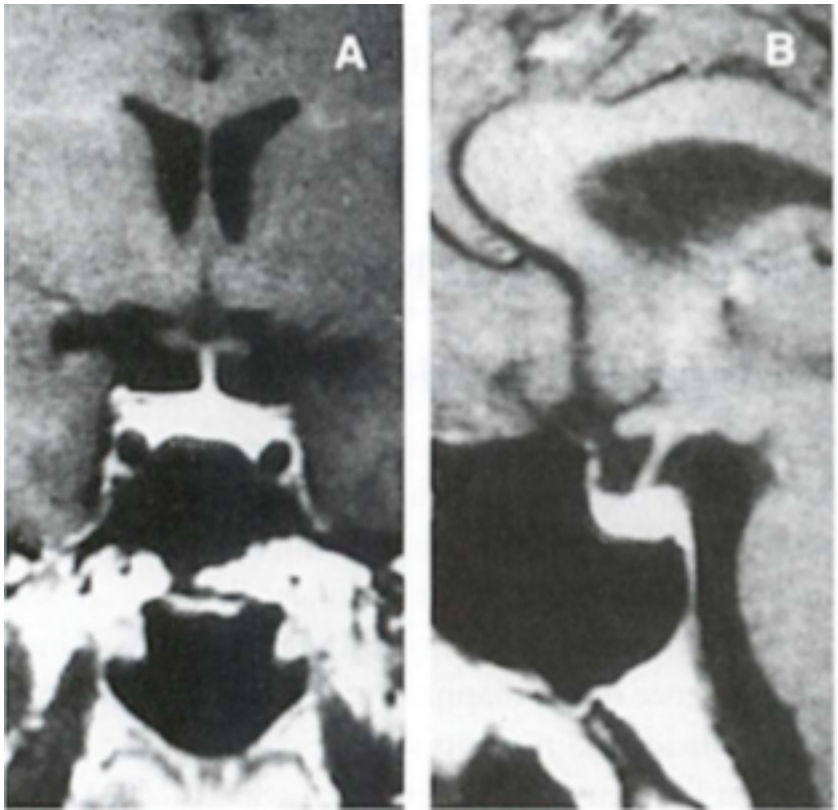
- ☐ IGF-1
- ☐ hGH (hormon de creștere uman)
- ☐ Glicemie
- ☐ Hb A1c - Hemoglobină glicată

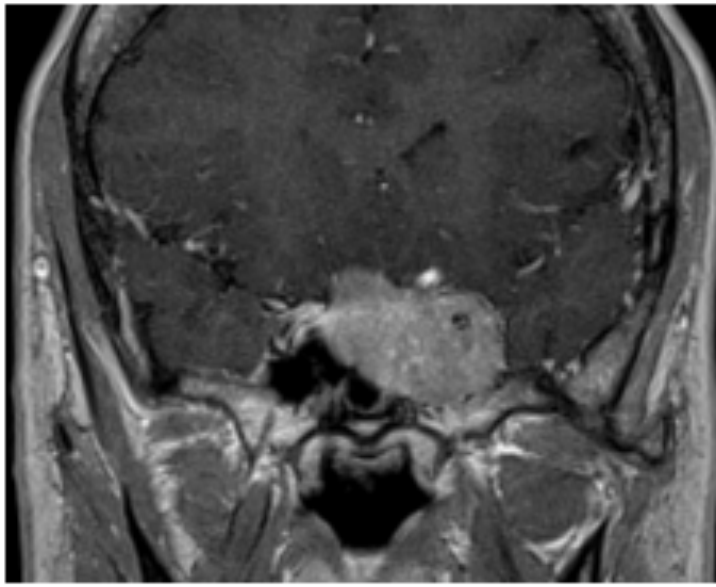
DATA EMITERII

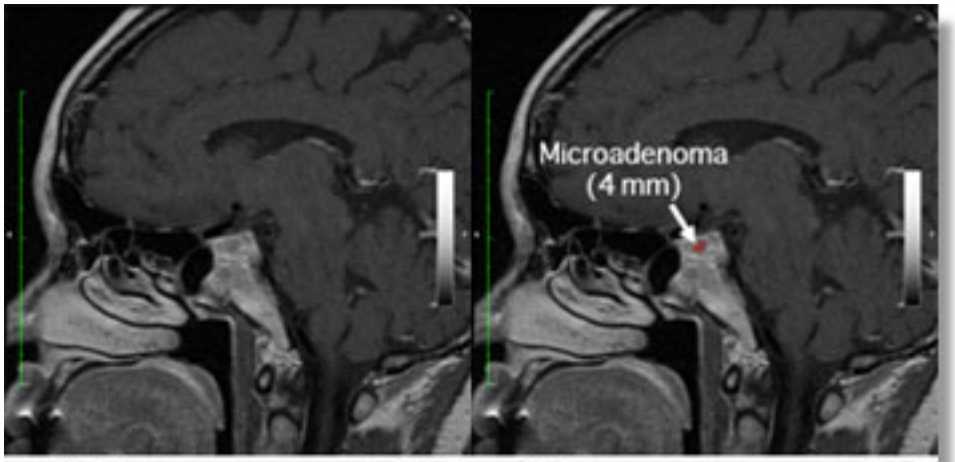
Ziua	Luna	Anul
03	02	2017

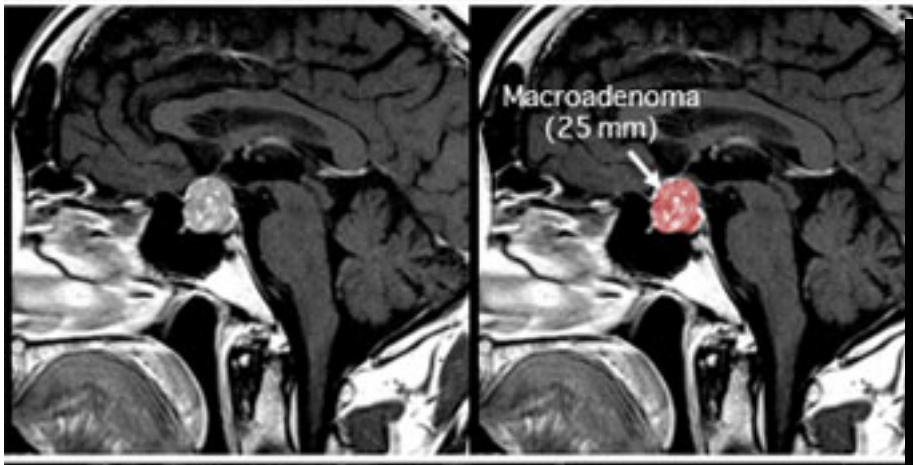
NOVARTIS ONCOLOGY

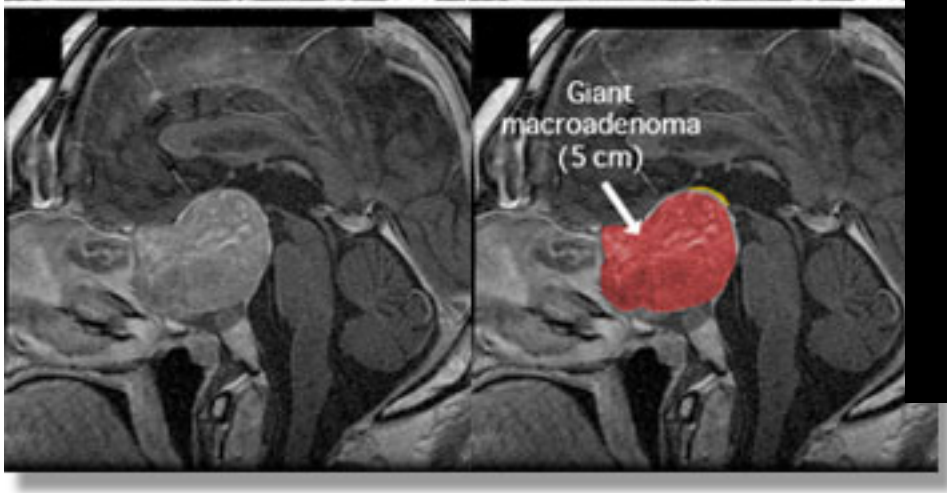

A
B

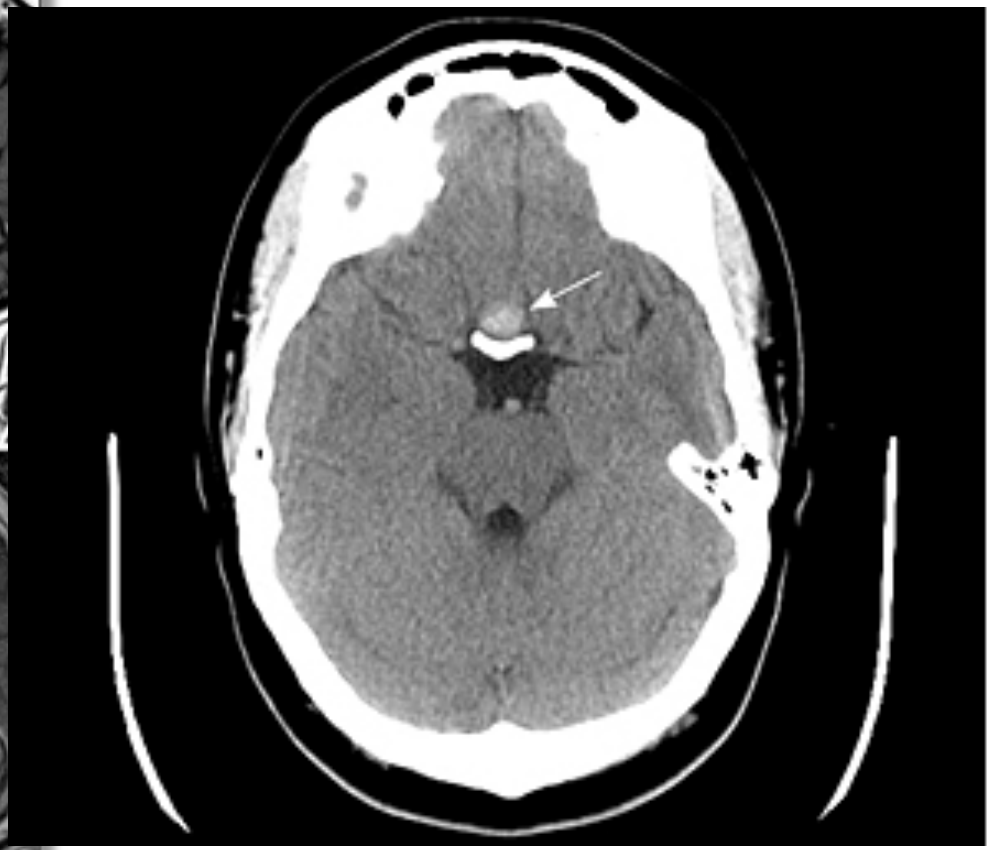

A
B




Microadenoma
(4 mm)


Macroadenoma
(25 mm)


Giant
macroadenoma
(5 cm)



Dg complicatiilor

- DZ TTGO/FO/VCN/microalbuminurie
- HTA FO/microalbuminurie/RFG
- CMH EKG/disfunctie diastolica/ECO
- GN eco, FNAC

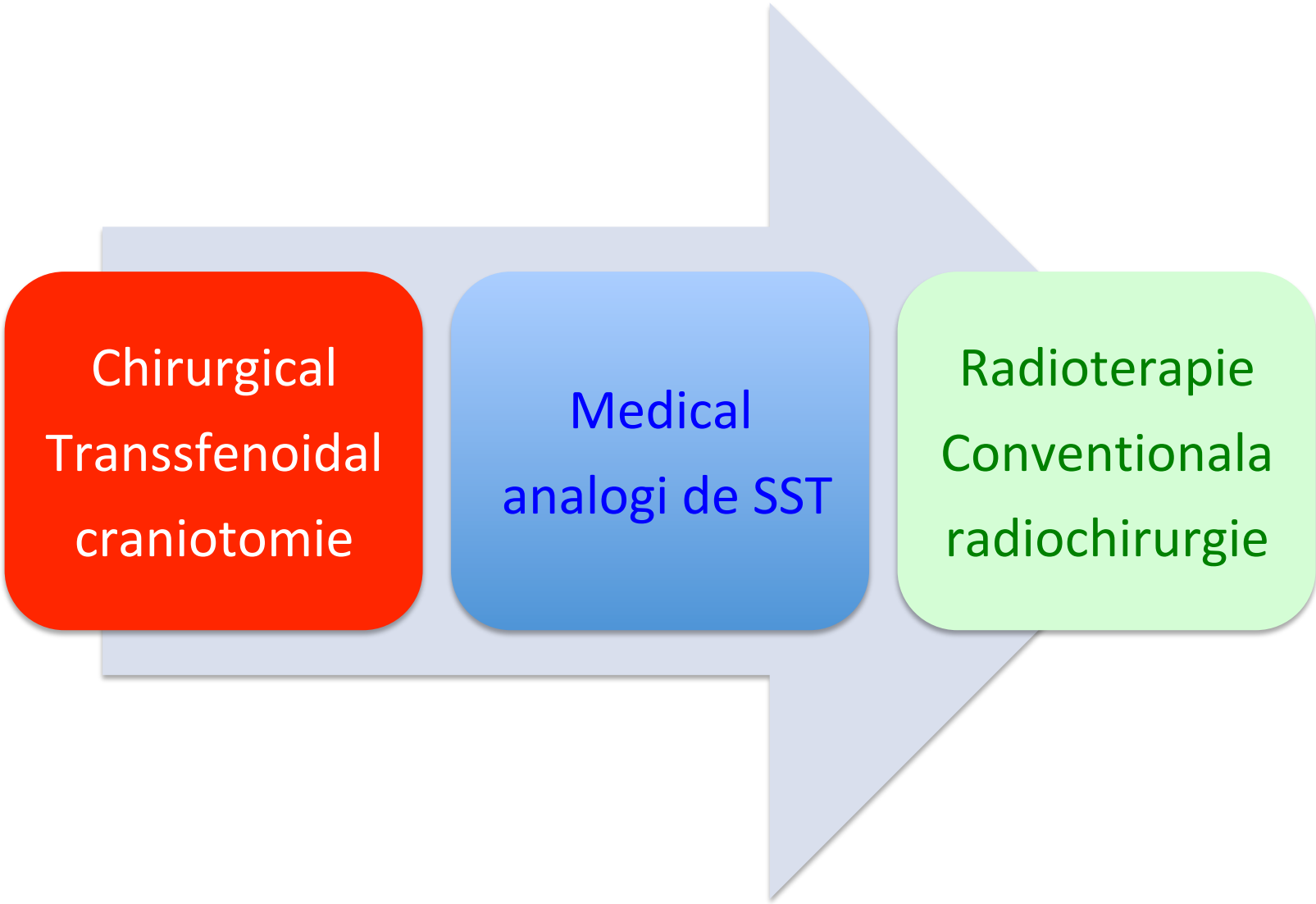
Diagnostic ≠

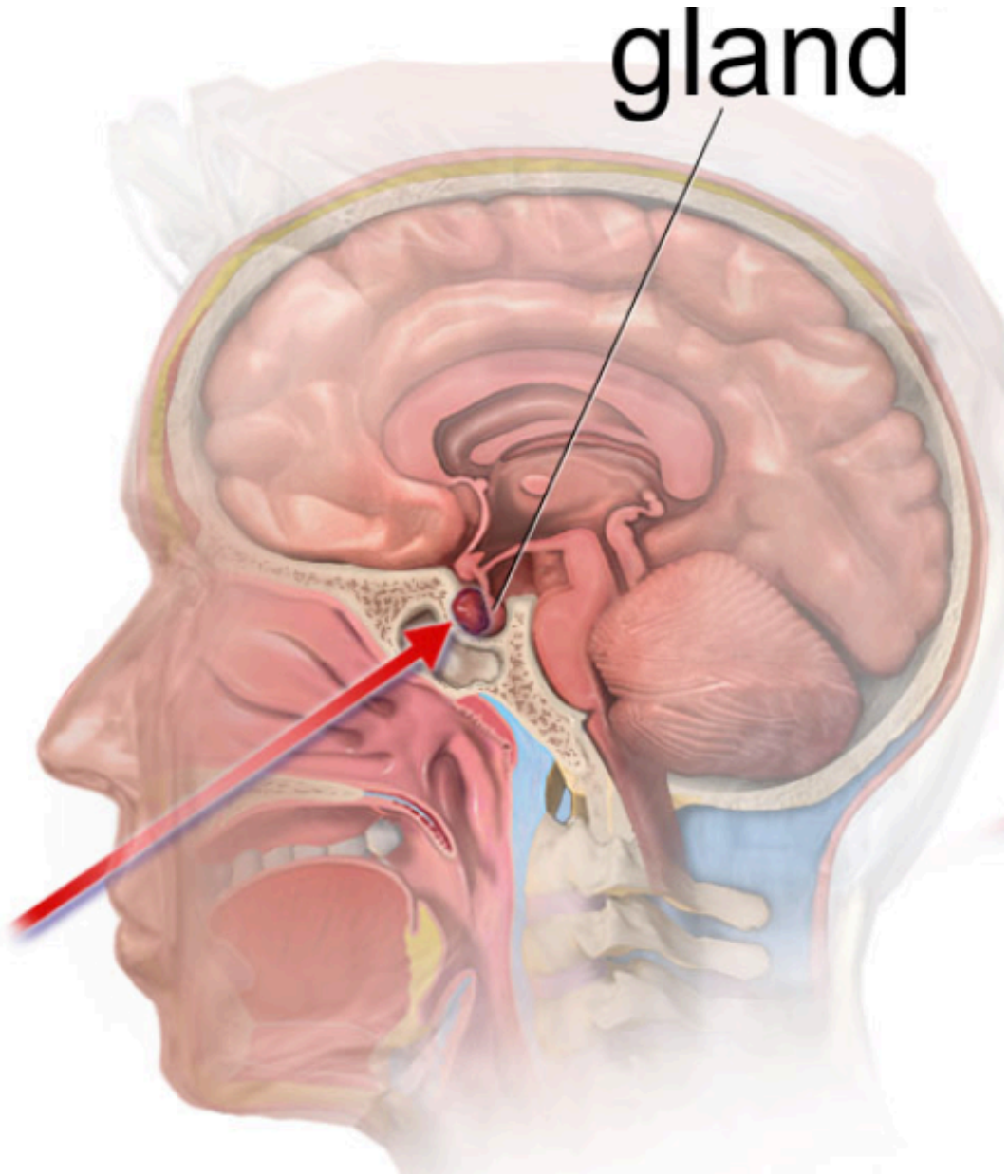
1. Alte cauze de hipersecretie gh/IGF1
   - Anxietate
   - Efort fizic excesiv
   - Afectiune acuta
   - BCR
   - Infometare
   - Malnutritie protein calorica
   - Anorexie nervoasa
2. Secrectie ectopica de GH sau GHRH
   - carcinom pulmonar
   - tumori carcinoide
   - celule C pancreatice

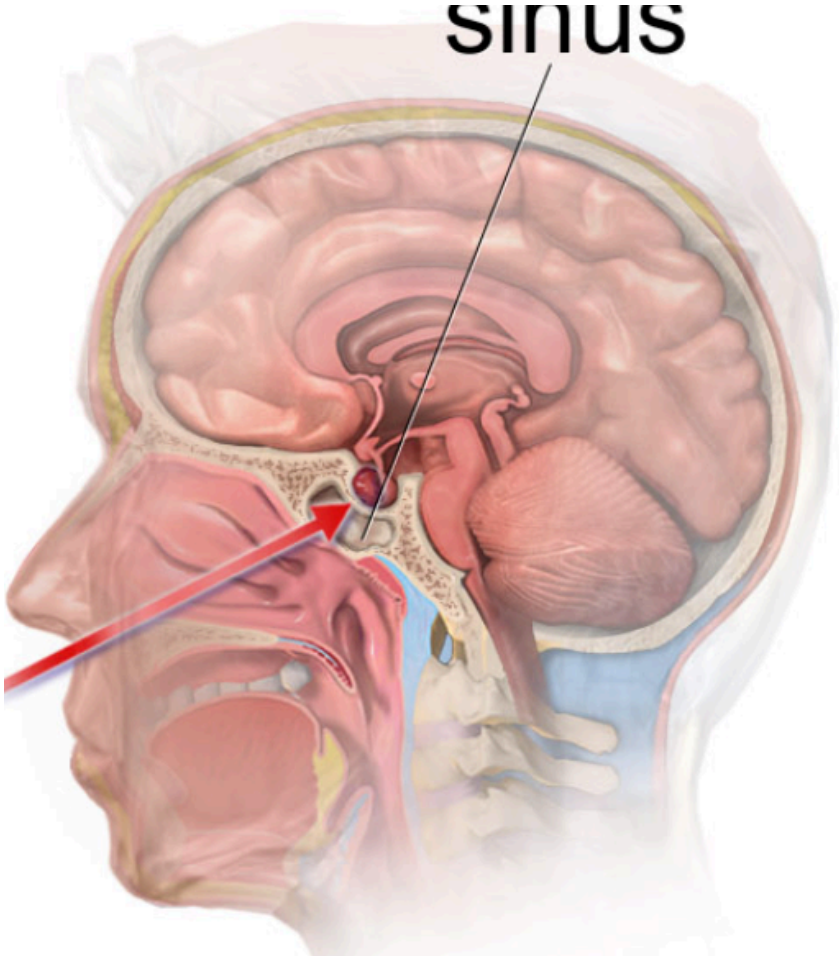
ABSENTA
tablou clinic

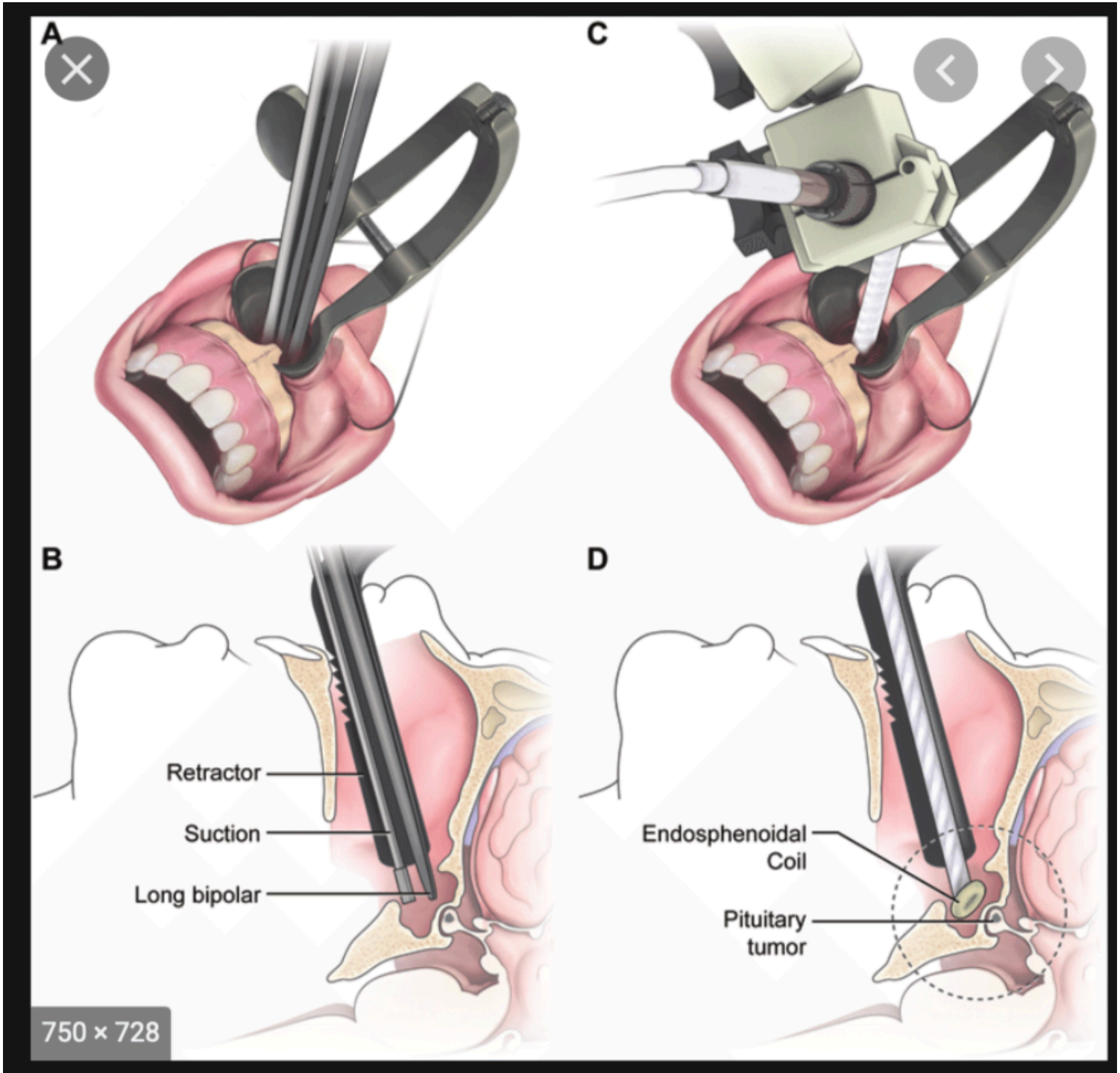
Hipofiza
normala

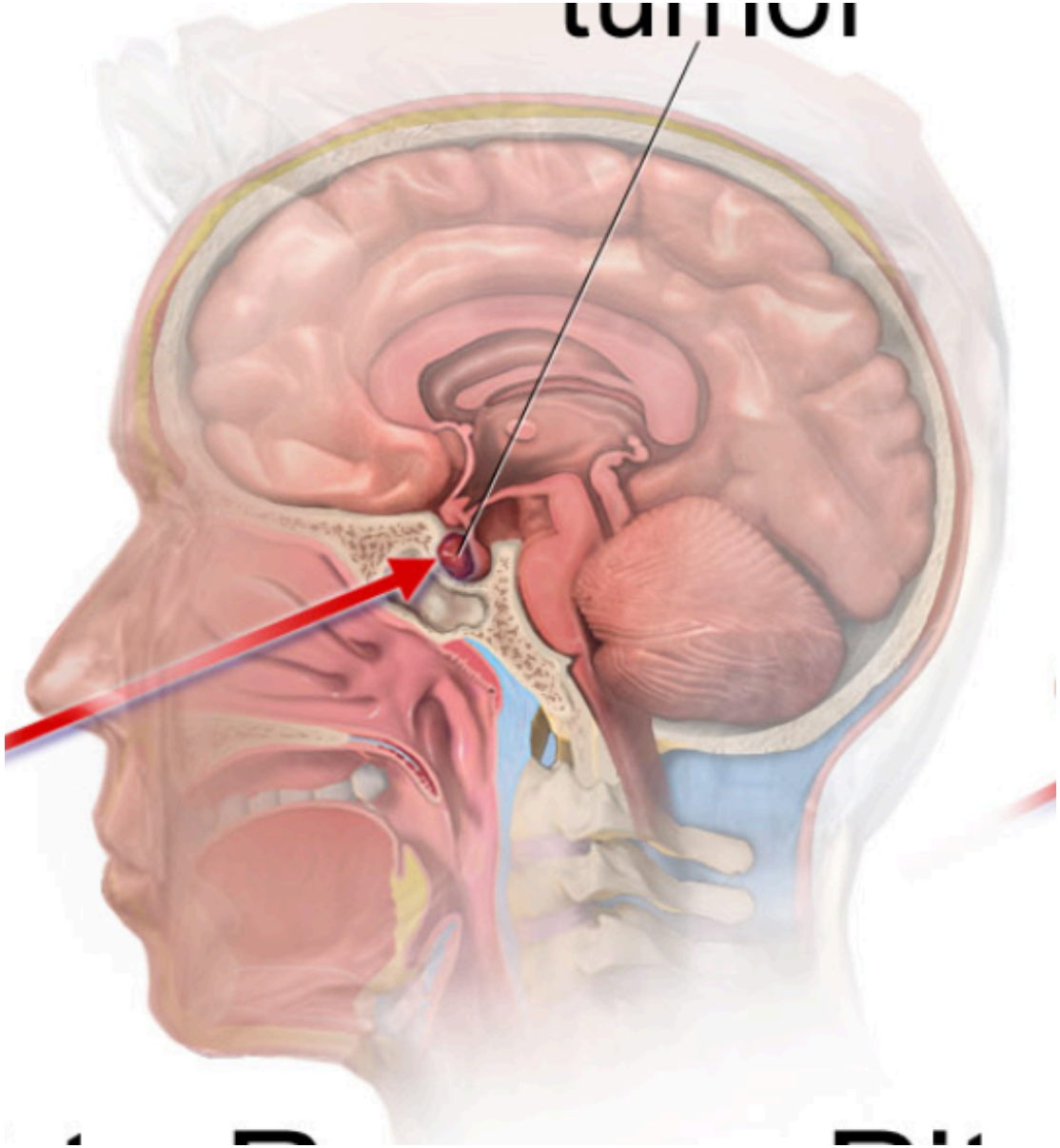
Tratament

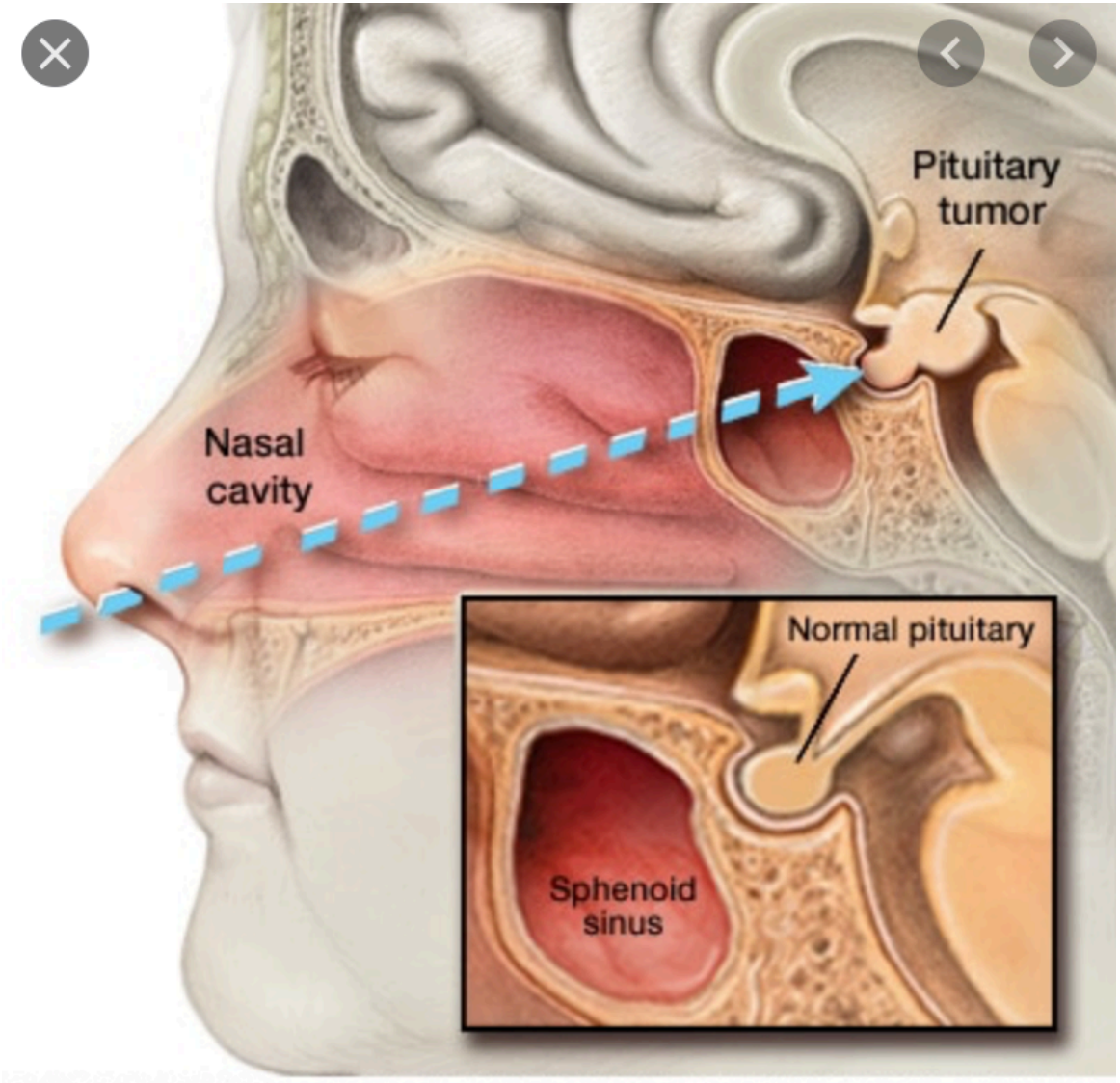

Chirurgical
Transsfenoidal
craniotomie
Medical
analogi de SST
Radioterapie
Conventionala
radiochirurgie


gland


Sinus


A
C
B
D
Retractor
Suction
Long bipolar
Endosphenoidal
Coil
Pituitary
tumor
750 × 728


tumor



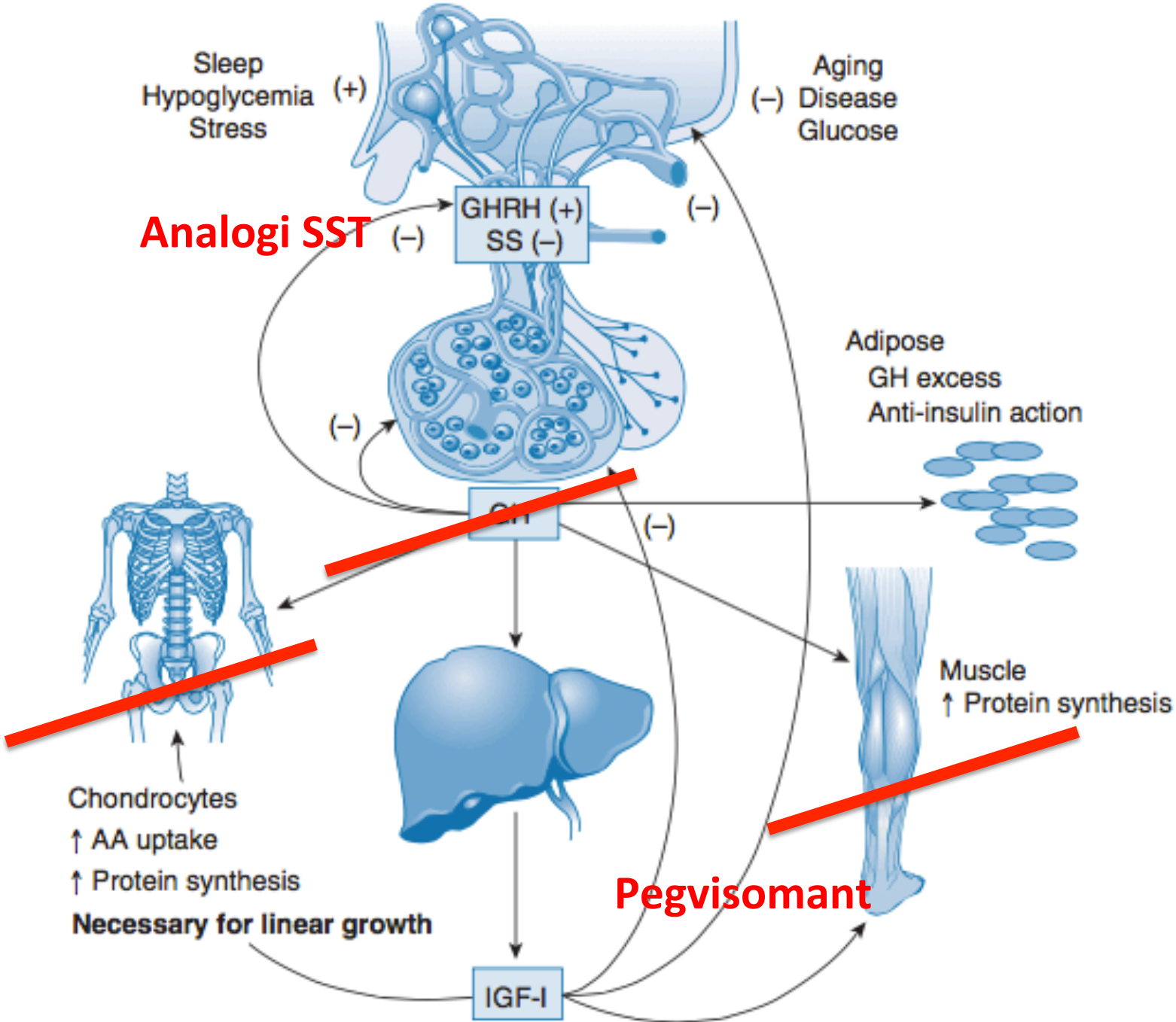
Tratament

- **I linie = Chirurgical**
  - adenomectomie selectiva transsfenoidala
  - craniotomie extensie supraselara

Rezultate reducere GH = 60-80% cazuri | tumora < 2cm
GH < 50 ng/mL

= 30-60% | tumora > 2 cm
extensie supras
GH > 50 ng/mL

Recurenta < 5%


Sleep
Hypoglycemia
Stress
(+)
Aging
(–) Disease
Glucose
Analogi SST
(–)
GHRH (+)
SS (–)
(–)
(–)
Adipose
GH excess
Anti-insulin action
(–)
Muscle
↑ Protein synthesis
Chondrocytes
↑ AA uptake
↑ Protein synthesis
Necessary for linear growth
Pegvisomant
IGF-I

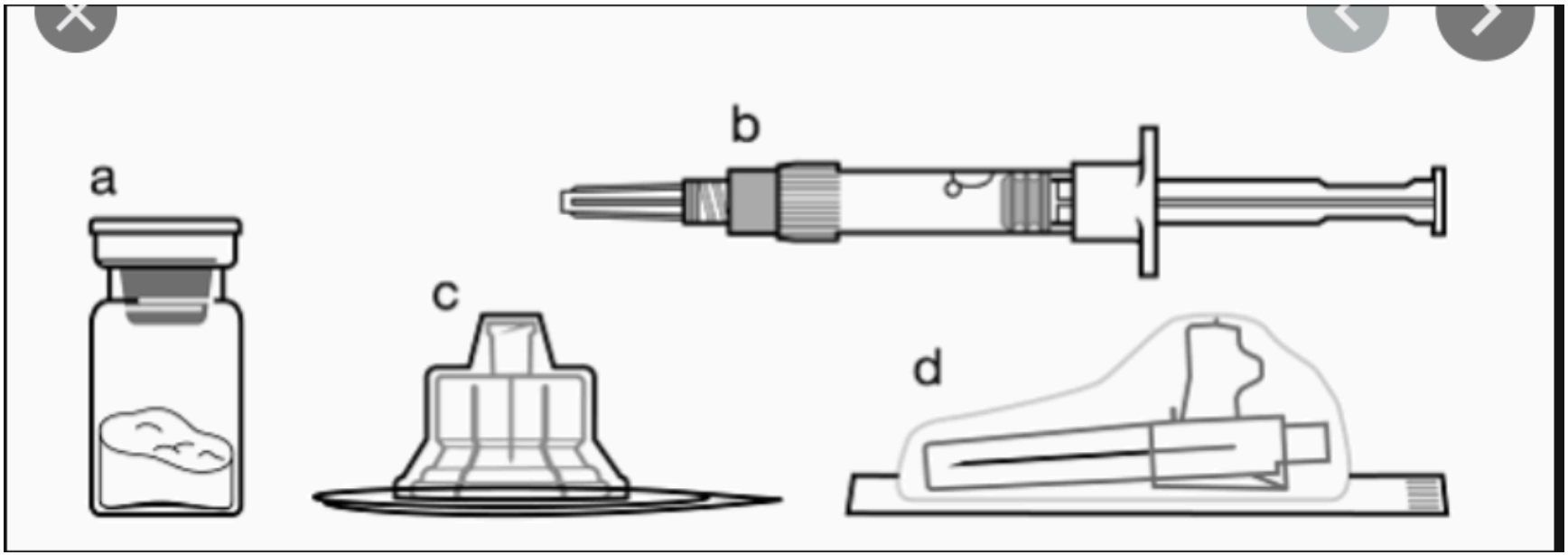
- **linia II = medicamentos** **ANALOGI SOMATOSTATINA**
  - Hipersecretie reziduala (Rx, Ch) OCTREOTID
  - Contraindicatie pentru chirurgie LANREOTID
  - Tumori mici, de preferat la varstnici

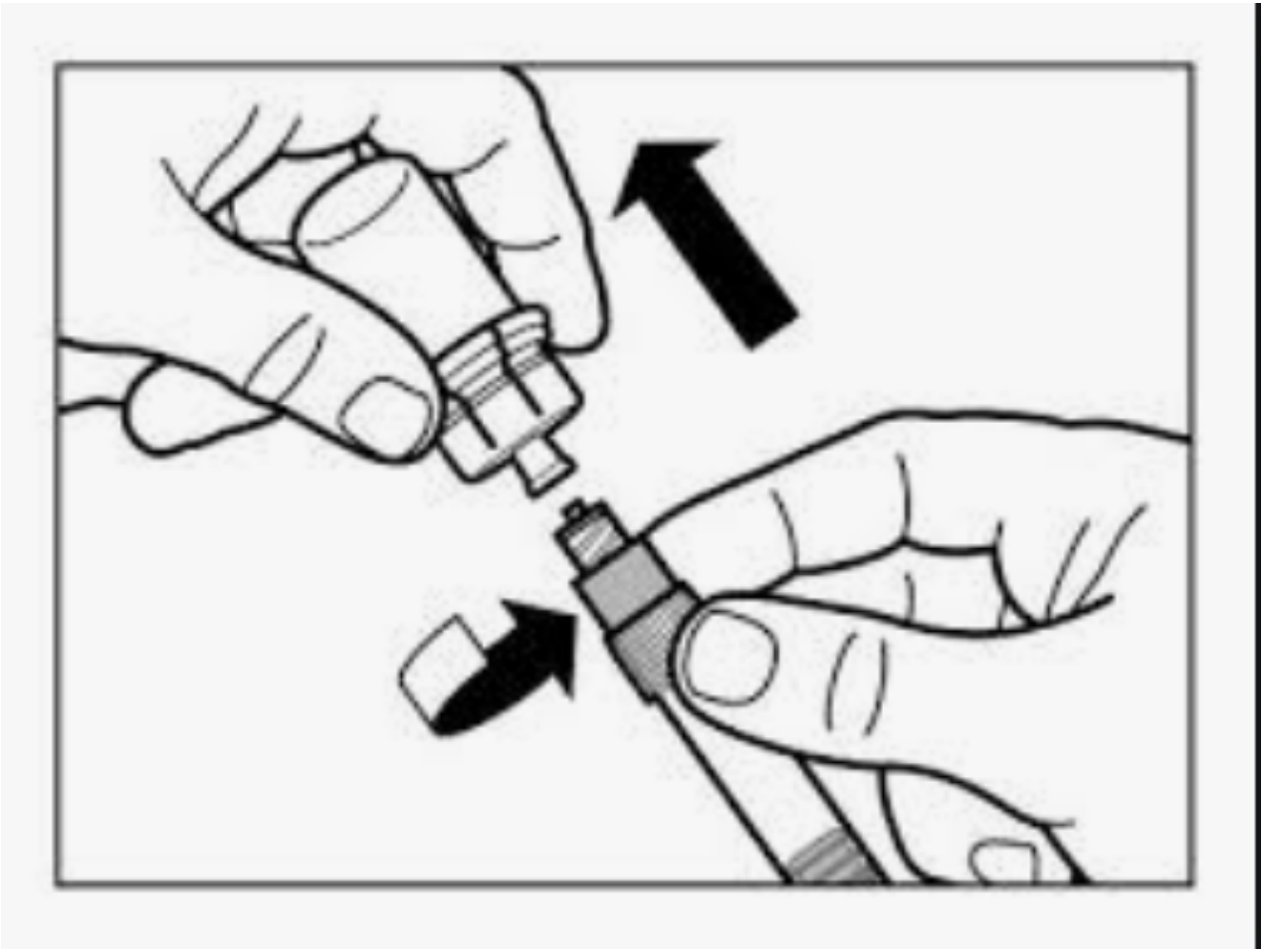
  Actiune: activare receptor SST 2, SST5

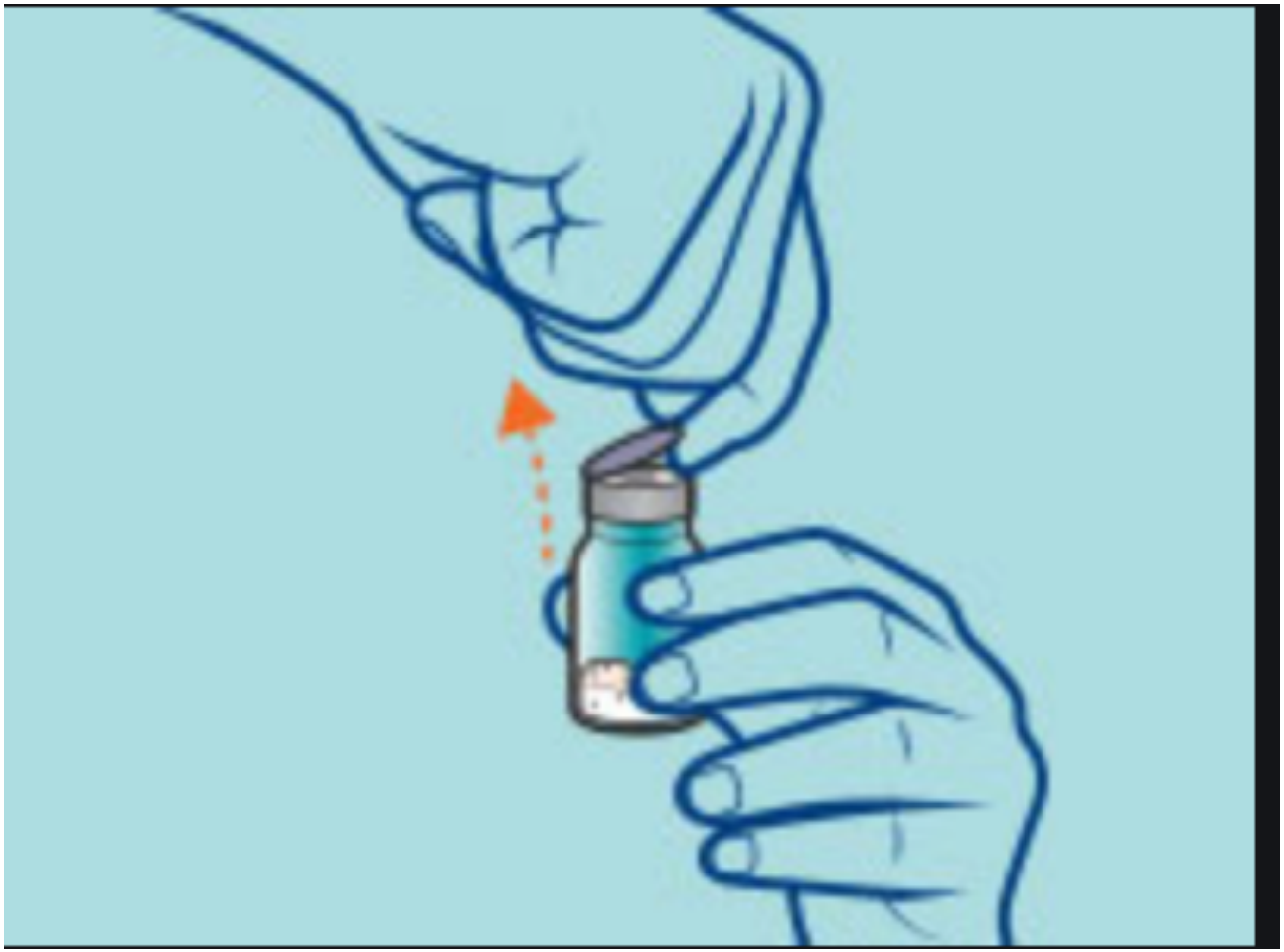
  Adminsitrare lunara (retard)

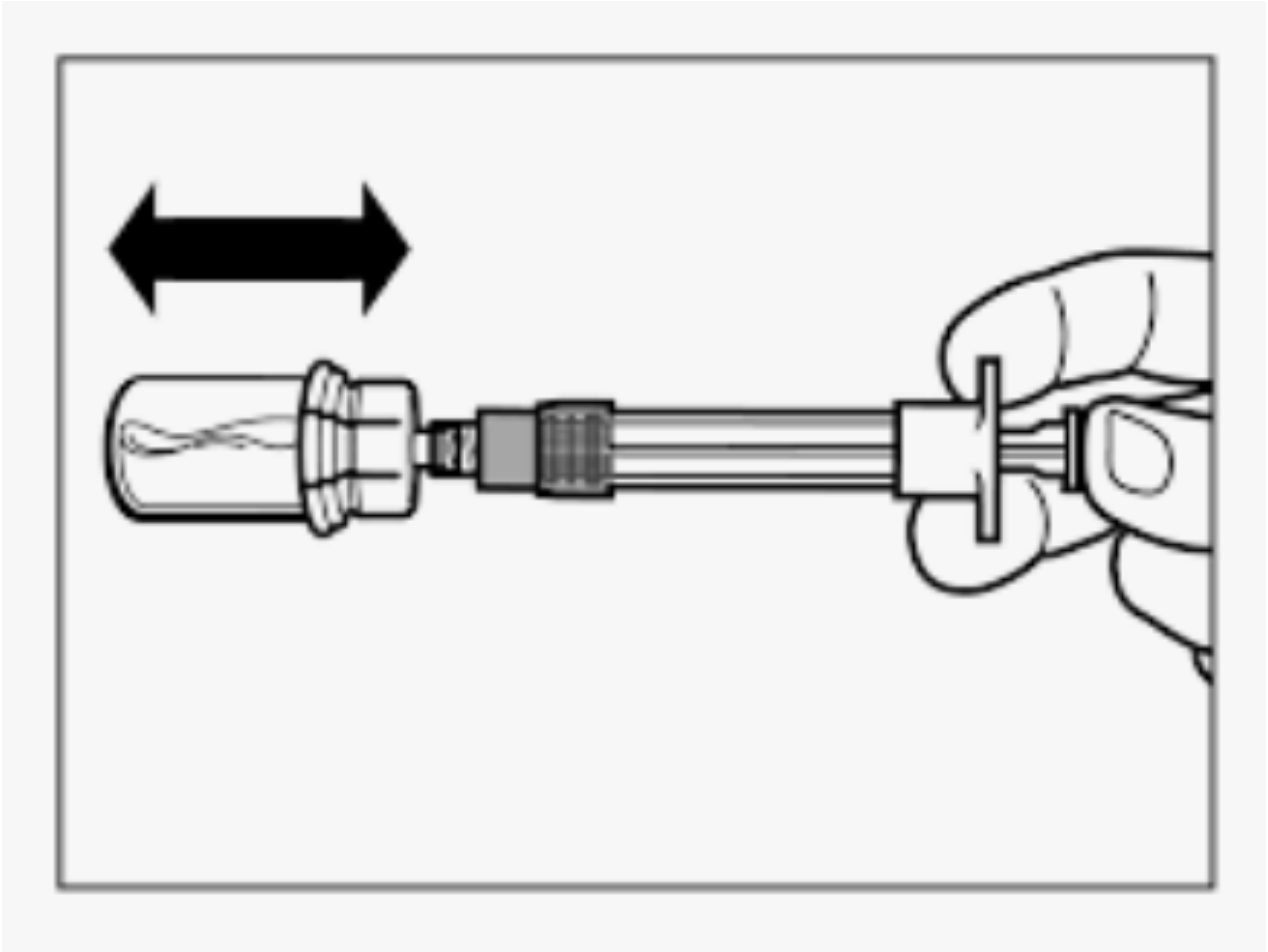
  Rezultate reducere GH = 75 % cazuri
  reducere tumorala = cu circa 20% din initial

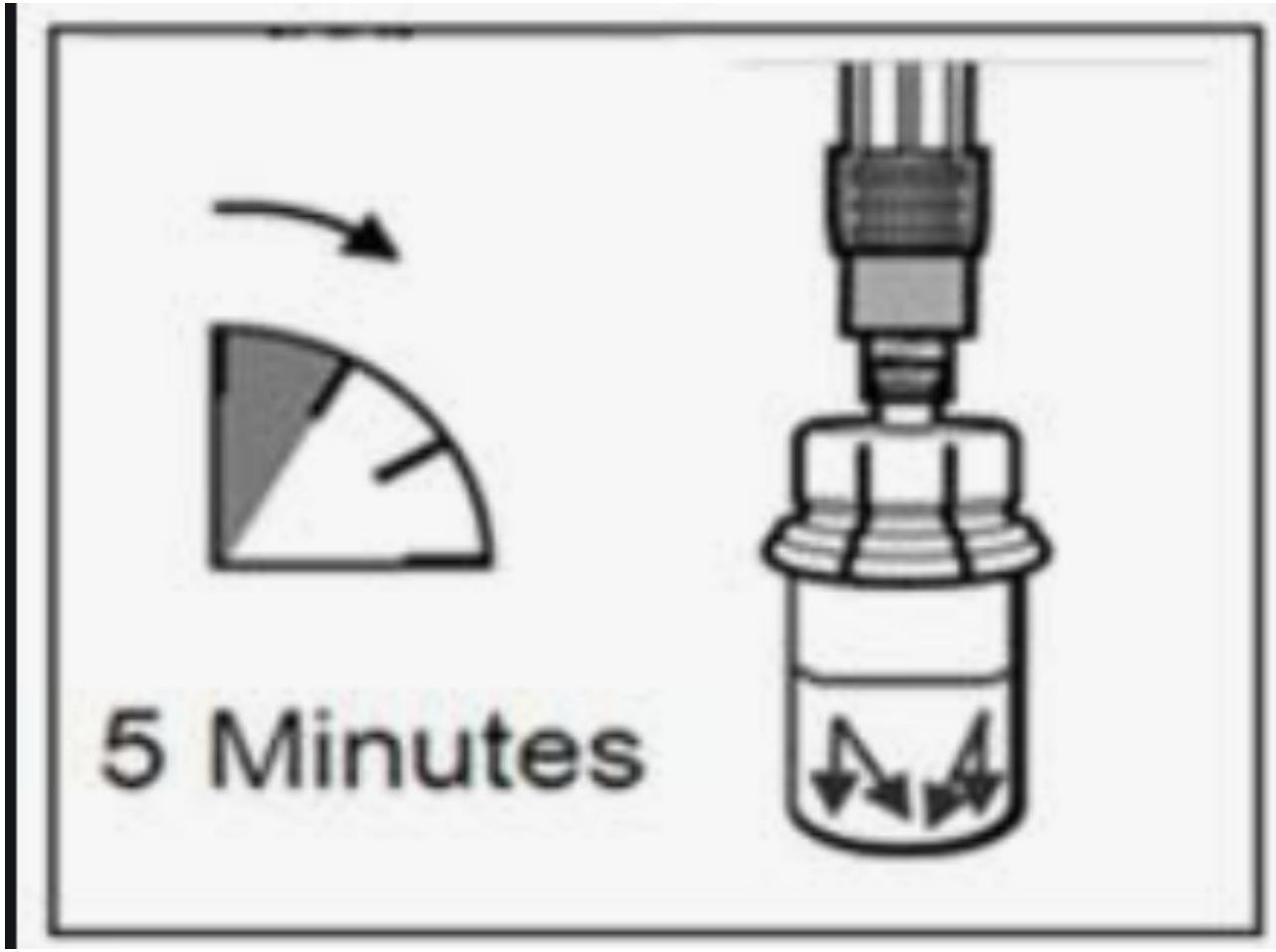
SANDOSTATIN

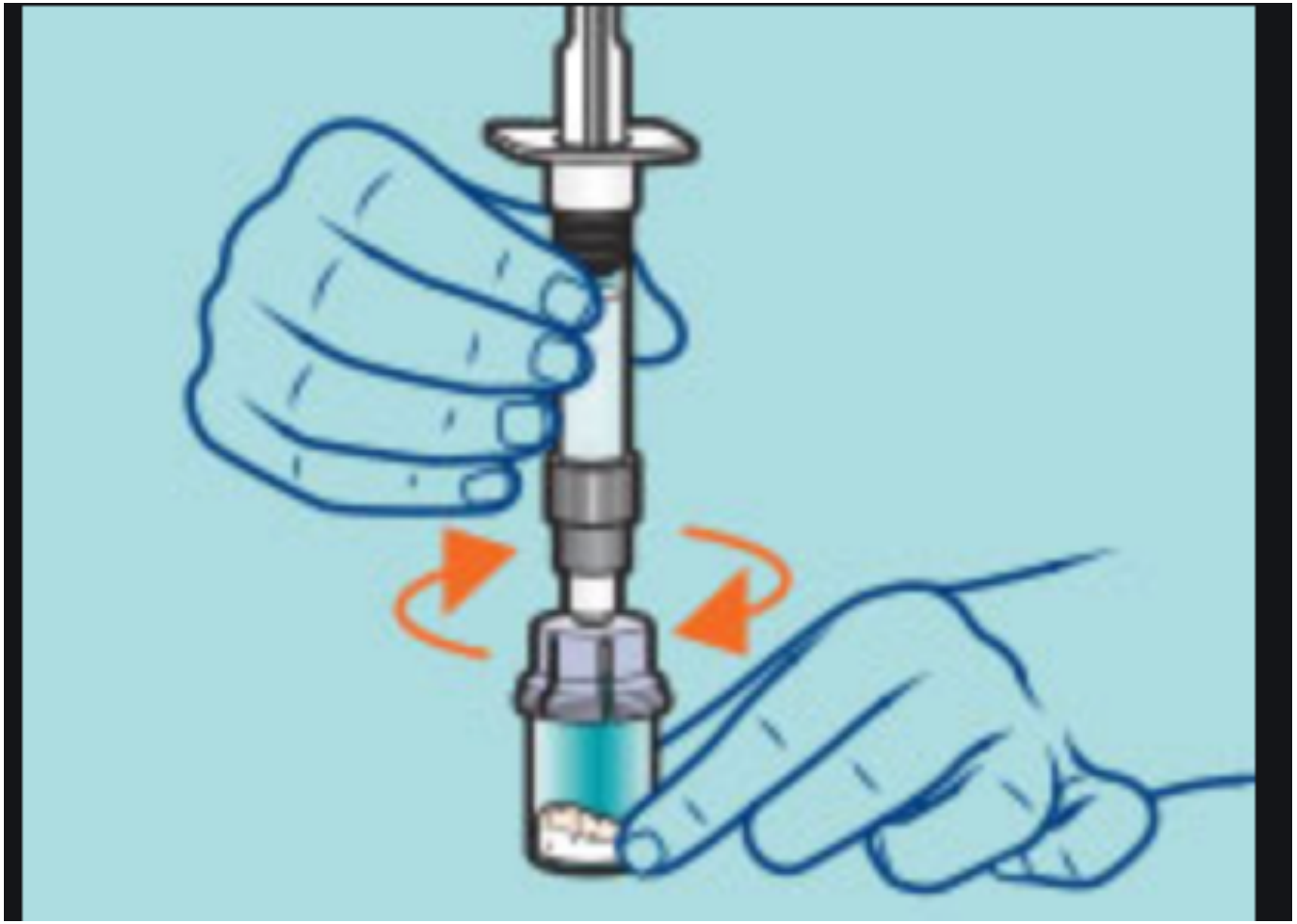

a
b
c
d

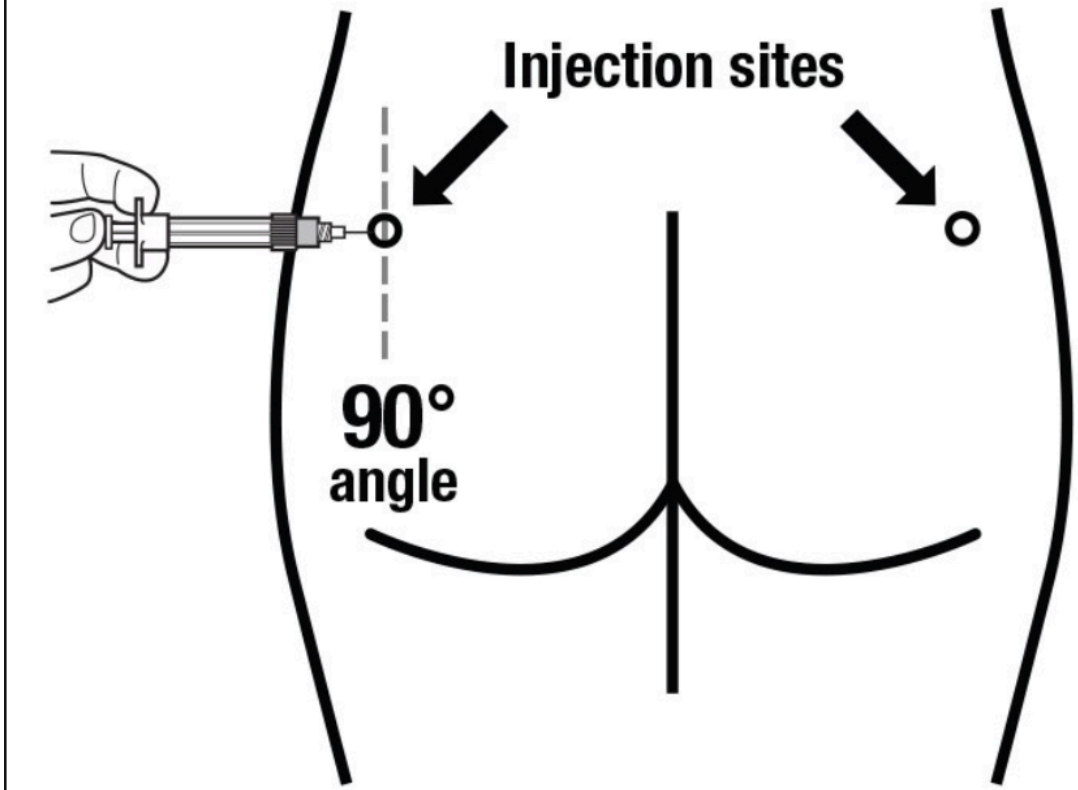







5 Minutes




Injection sites
90°
angle

PEGVISOMANT

Antagonist receptor GH

Administrare zilnica, sc

Normalizeaza IGHF1 la 90% din cazuri

De rezerva: cost/adminsitrare zilnica

Tratament

Linia III - Radioterapie

1. Conventionala

   45 Gy — succes in 60-80%

   nerecomandata — **normalizare GH in 10-15 ani**

   hipopituitarism 100%

2. Gamma knife chirurgie radiologica

   25-75 Gy — remisiune 50-90% in 2 ani

In paralel

- Tratamentul complicatiilor
  - Insuficienta liniilor hipofizare
  - GN
  - Obezitate
  - DZ
  - Afectiuni cardiace
    - HTA
    - Cardiomegalie
    - CMH

RASPUNS bun

- **Clinic OK**
- **IGF1 N**
- **Inhibitie**

GH < 1 mg/ml

RASPUNS partial

- Clinic variabil
- IGF ↑
- Inhibitie

GH < 1 mg/ml

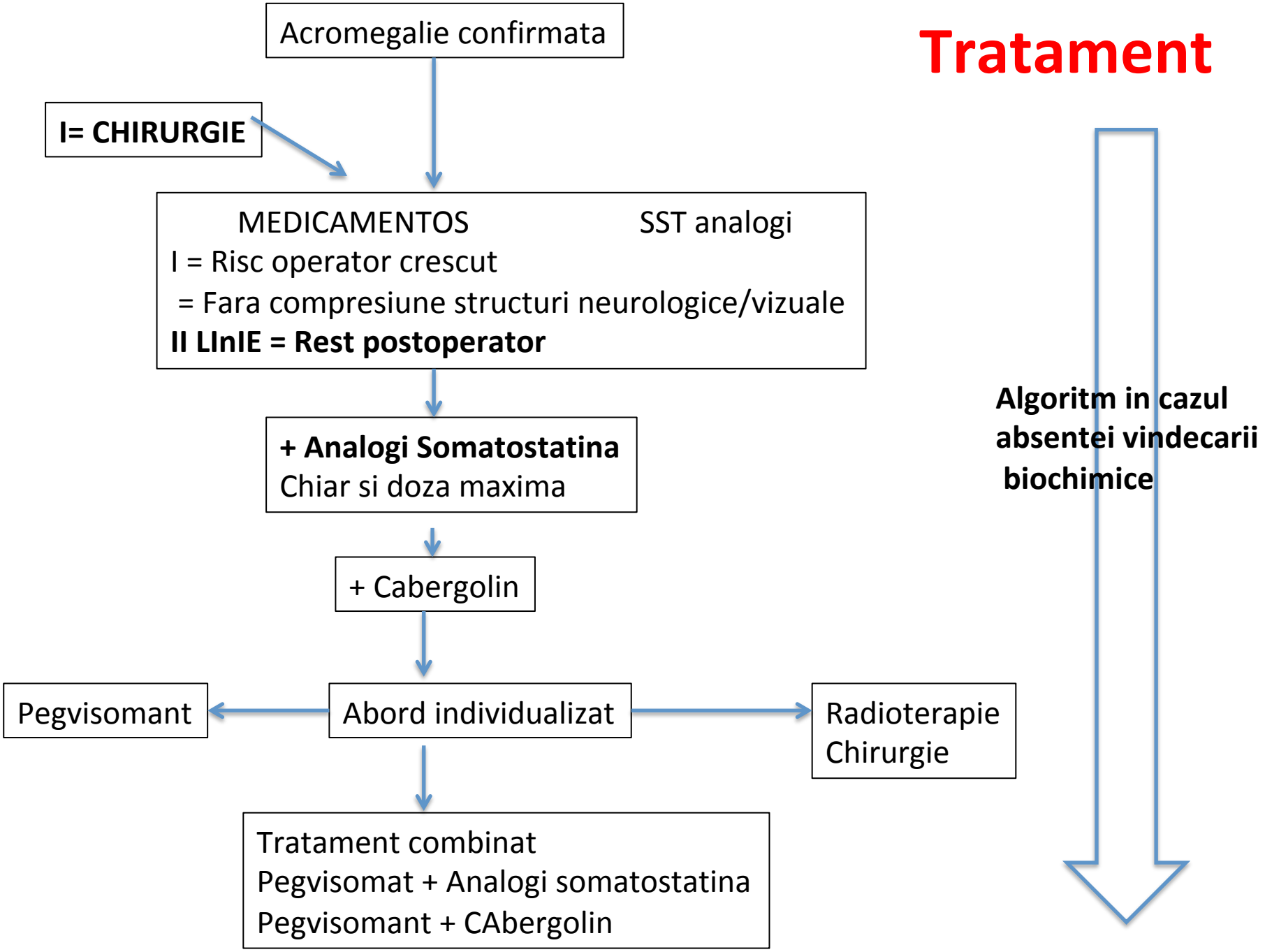
REZISTENT

- Clinic activ
- IGF ↑
- Inhibitie

GH > 1 mg/ml

- GH > 1 mg/ml

Tratament


Acromegalie confirmata
I= CHIRURGIE
MEDICAMENTOS SST analogi
I = Risc operator crescut
= Fara compresiune structuri neurologice/vizuale
II LInIE = Rest postoperator
+ Analogi Somatostatina
Chiar si doza maxima
+ Cabergolin
Pegvisomant
Abord individualizat
Radioterapie
Chirurgie
Tratament combinat
Pegvisomat + Analogi somatostatina
Pegvisomant + CAbergolin
Algoritm in cazul absentei vindecarii biochimice