

Cerveau hors norme

Microcéphalie

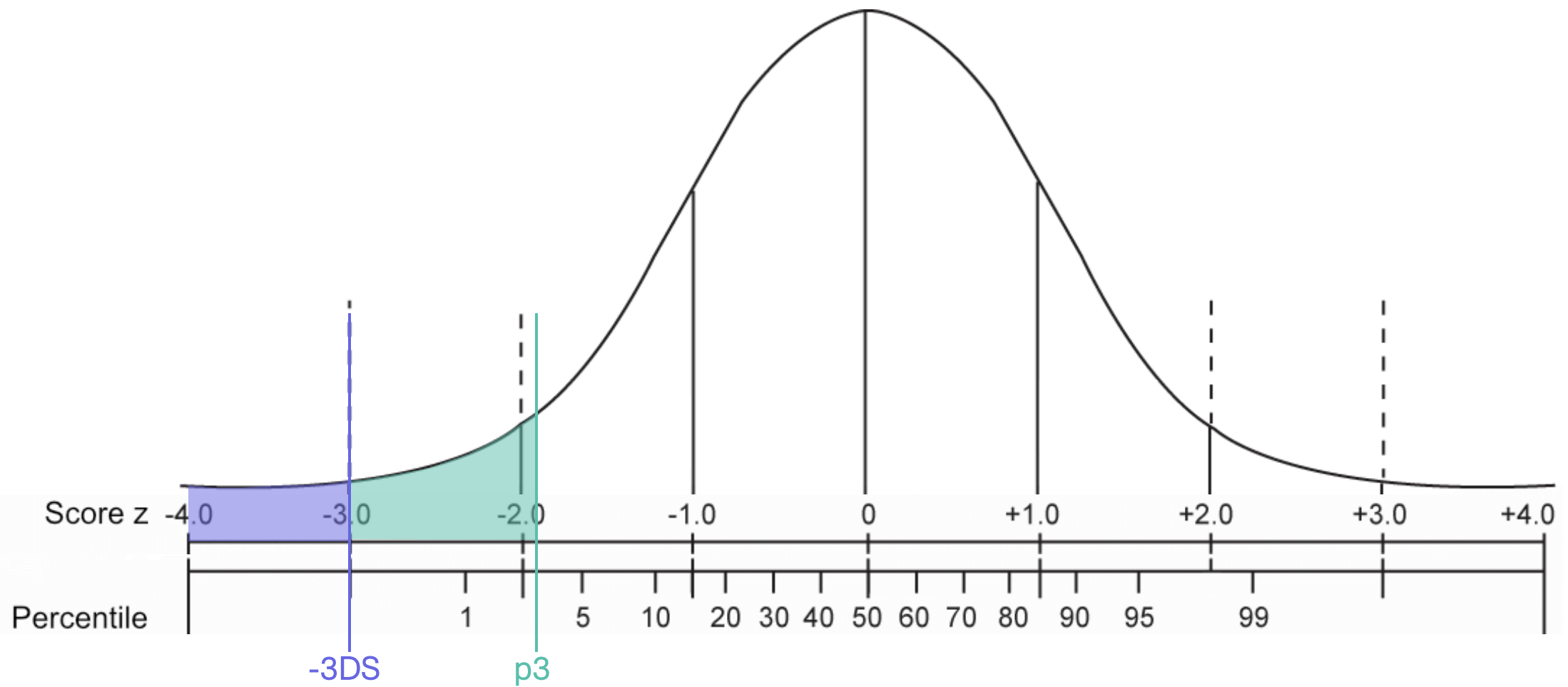
Marie Laterre

15/11/2025



- 
1. Définition
 2. Coupe
 3. Courbes
 4. Faible rendement
 5. Analyse systématique
 6. Démarche & conclusion

Définition



Définition – calculateur de biométrie foetale

DATE DE LA MESURE DE LA LCC		LCC en 10ème de mm		
12 ▼ 05 ▼ 2025 ▼		73.8		
DATE DE L'ECHOGRAPHIE	BIP	PC	PA	FEMUR
06 ▼ 10 ▼ 2025 ▼	81.6	294.7	320	61.6

CALCULER

Date Echo	DDG ROB	DDG IG	BIP	PC	PA	FEMUR	EPF
06/10/2025	22-02-2025	21-02-2025	81.6 mm	294.7 mm	320 mm	61.6 mm	2364 grs

34SA + 2J (ROB) / 34SA + 3J (IG)		BIP	PC	PA	FEMUR	EPF
Percentile	Intergrowth	2 P	6 P	92 P	19 P	63 P
	CFEF	6 P	25 P	88 P	7 P	57 P
Z-score	Intergrowth	-2.12	-1.57	1.43	-0.86	0.32
	CFEF	-1.59	-0.67	1.18	-1.49	0.18



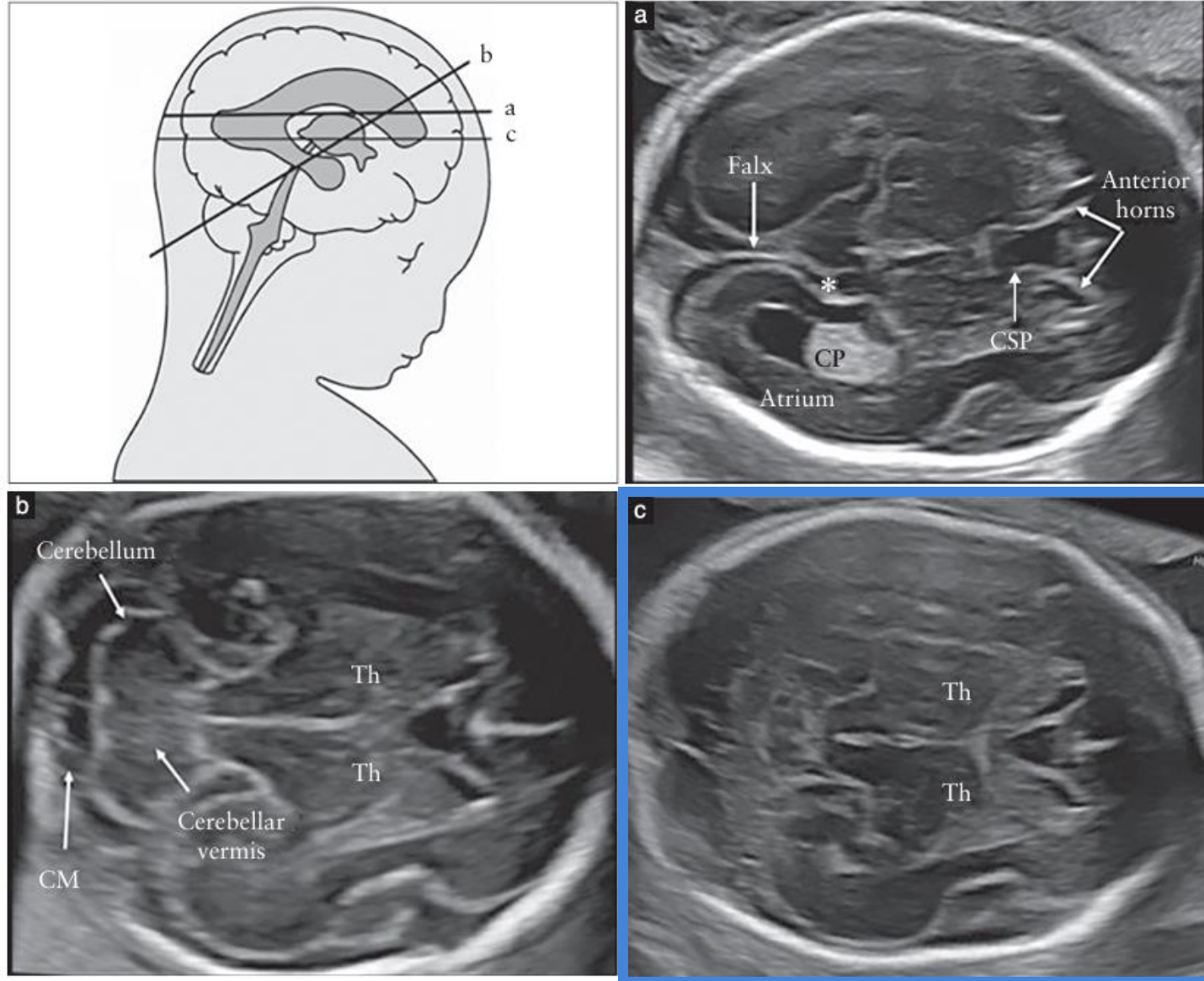
Biométries

Détermination des percentiles et des Z-scores des biométries élémentaires à partir de la LCC selon le référentiel CFEF et Intergrowth 21-st

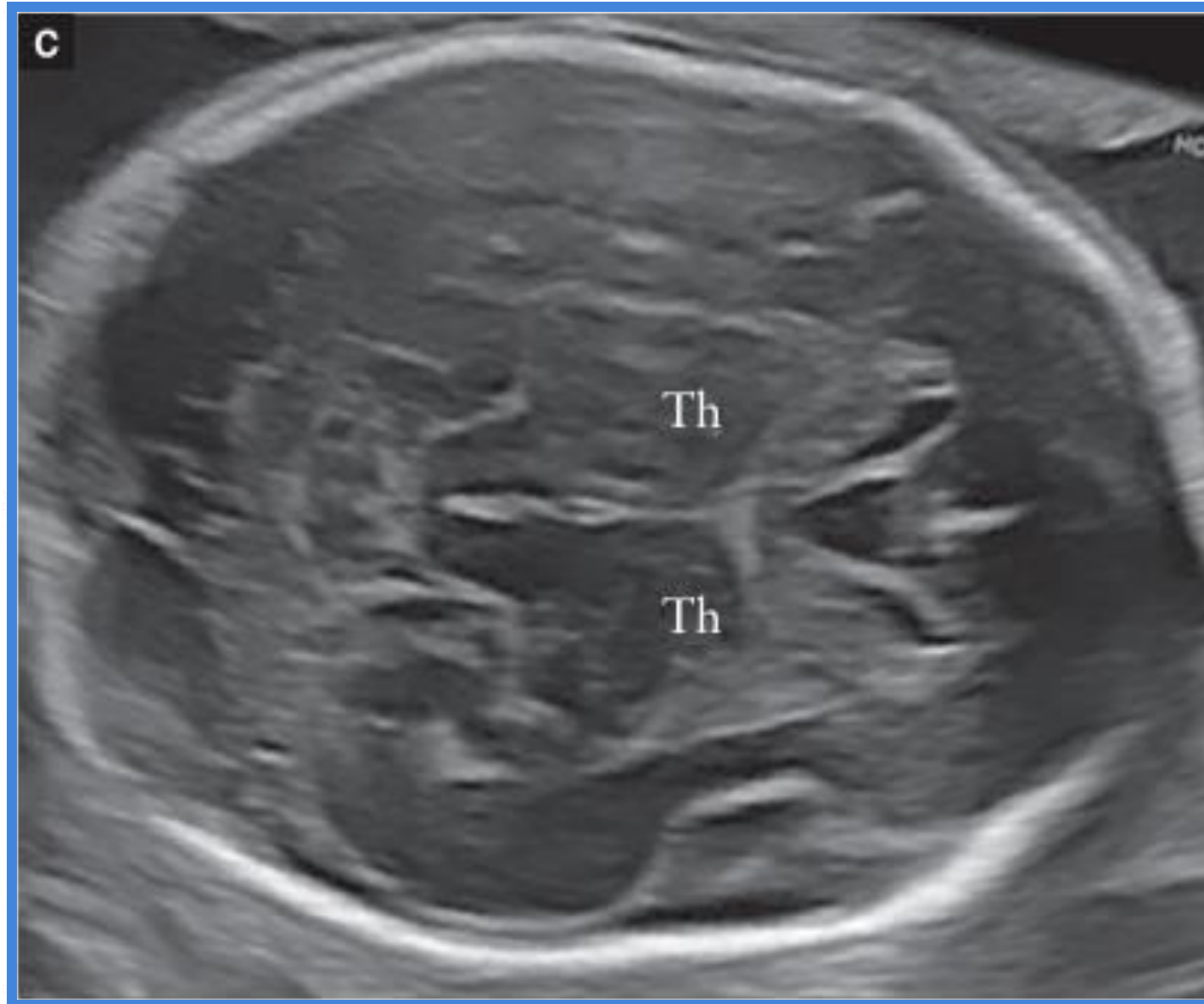
A privilégier

https://www.cfef.org/calculateur_test15.php

Coupe

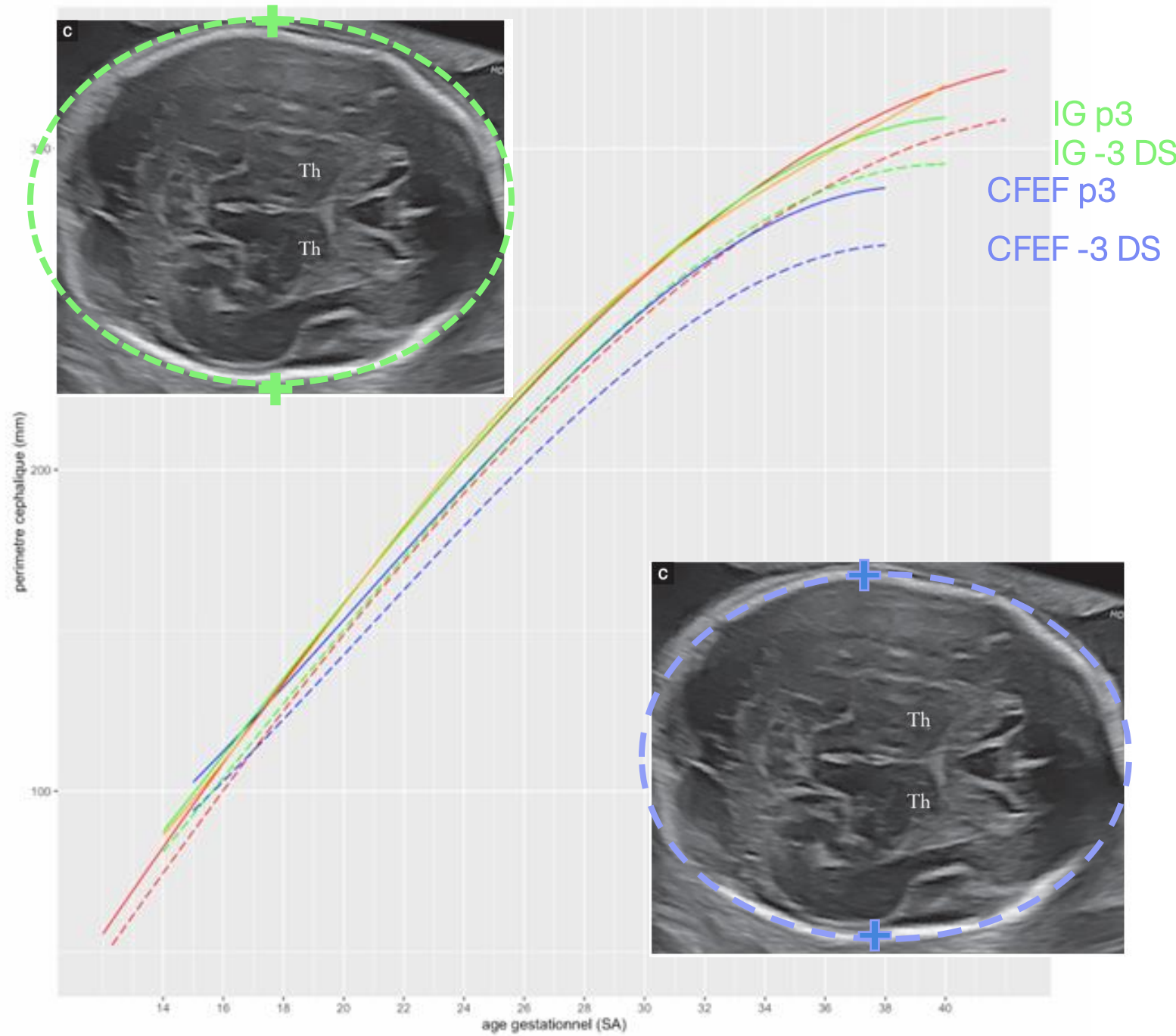


Coupe



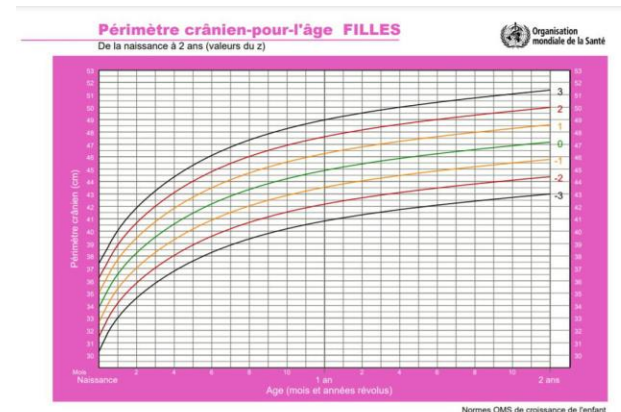
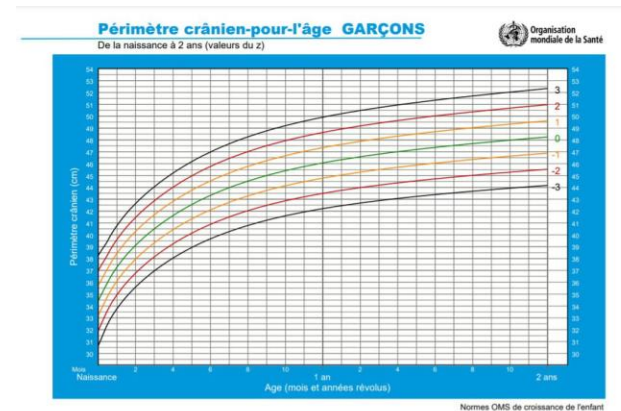
Courbes

- Callipers
 - CFEF: milieu – milieu
 - INTERGROWTH: externe – externe
- Type
 - CFEF: courbe descriptive
 - INTERGROWTH: courbe prescriptive



Courbes – VPP 61% IG (56% CFEF)

- Techniques de mesures différentes pré et post- natales
- Courbes de references (adaptées au sexe en post nat)
- Difficultés techniques fin de grossesse
- Microcéphalies postnatales



intergrowth21.ndog.ox.ac.uk

INTERGROWTH-21st

Newborn Sex:

Gestational age (weeks + days):

24	25	26	27	28	29	30	31
32	33	34	35	36	37	38	39
40	41	42					

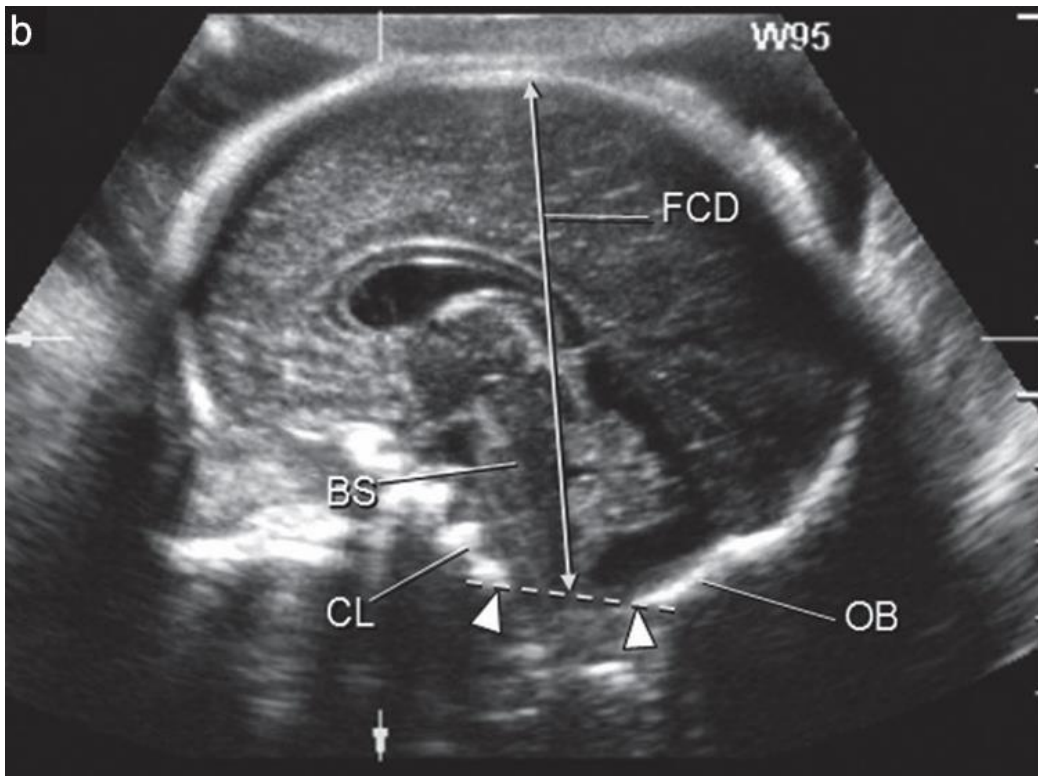
Length (cm):

Weight (kg):

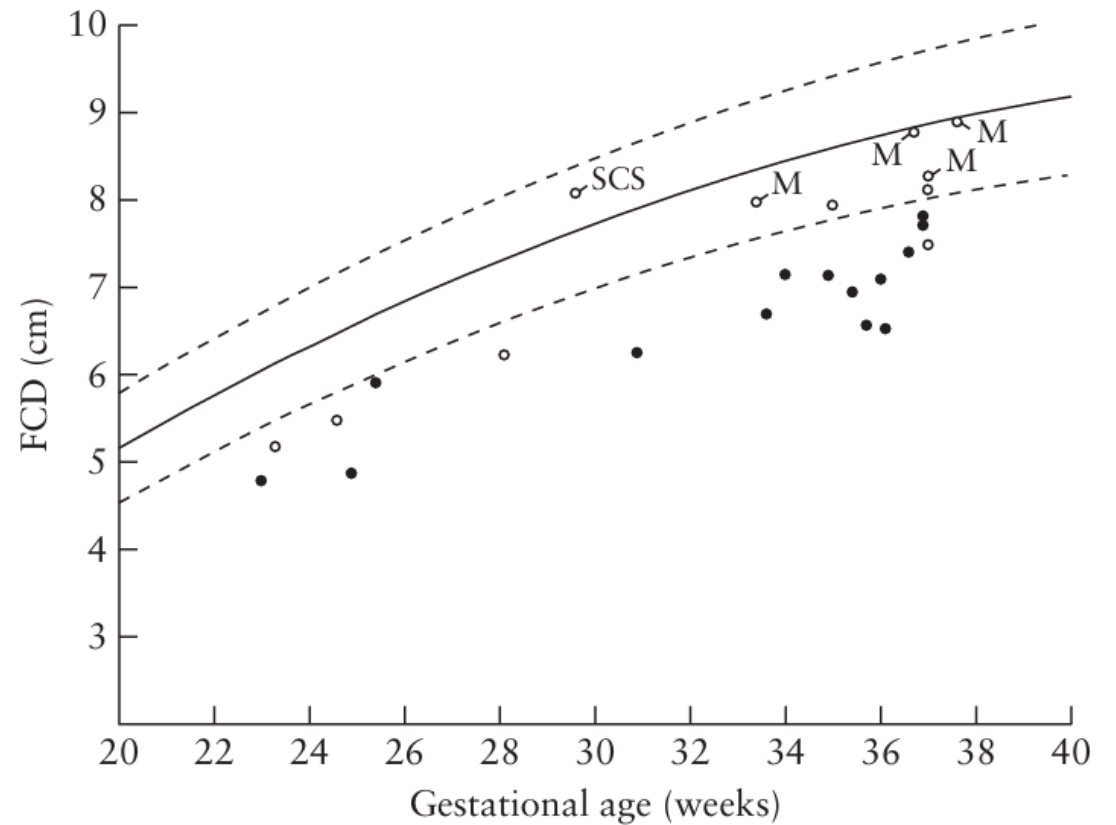
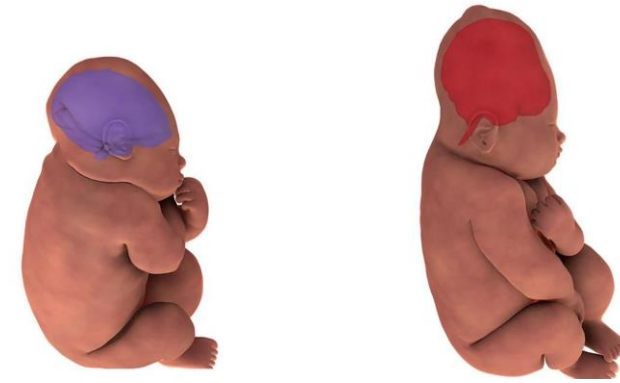
Head circumference (cm):

Aides à la précision

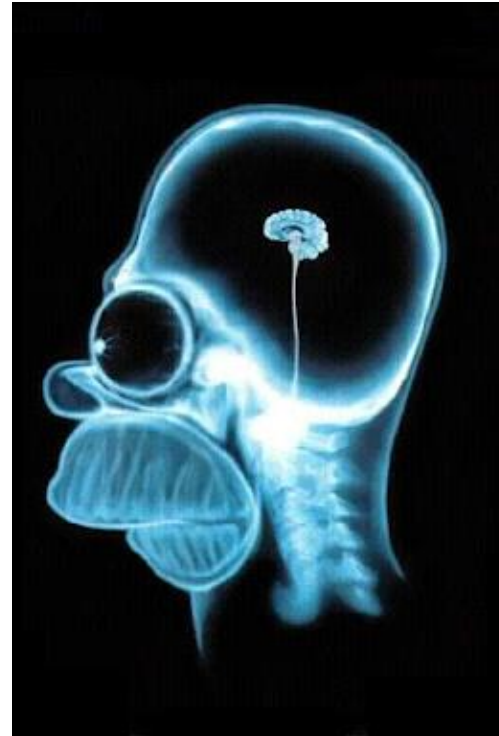
- Surtout pour les petits PC a la T3
- VPP 61% (IG) => 78%



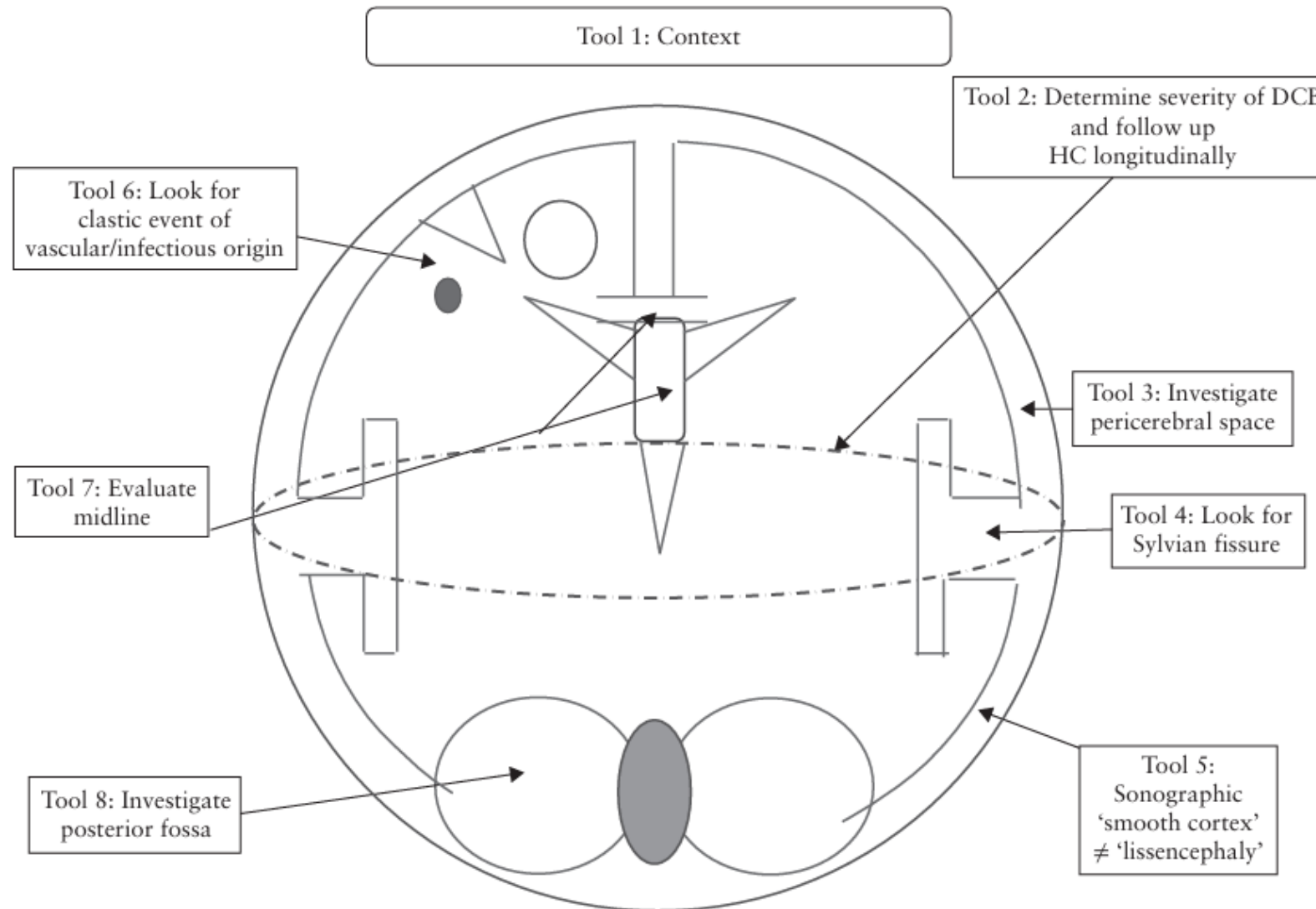
Zvi Leibovitz



Aides à la précision



Analyse systématique SNC



Analyse systématique SNC - Contexte

Tool 1: Context

Aide à la précision

- Analyse globale de la biométrie fœtale

Aide au diagnostic

- Consanguinité
- PC des parents et fratrie
- Causes environnementales (alcool, toxiques, fièvre)
- Facteurs de risques vasculaires (GMM)
- Phénylcétonurie maternelle

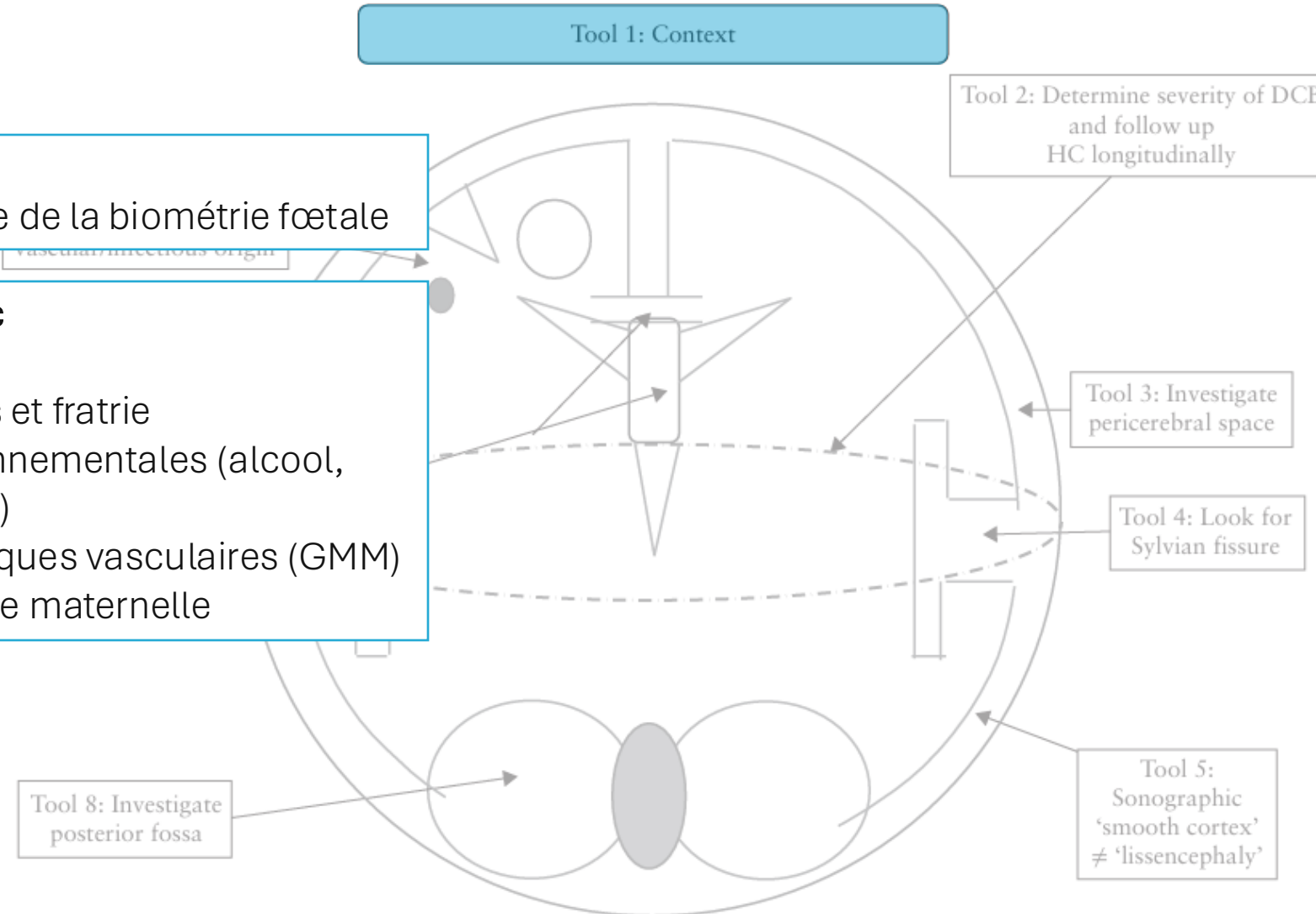
Tool 2: Determine severity of DCB and follow up HC longitudinally

Tool 3: Investigate pericerebral space

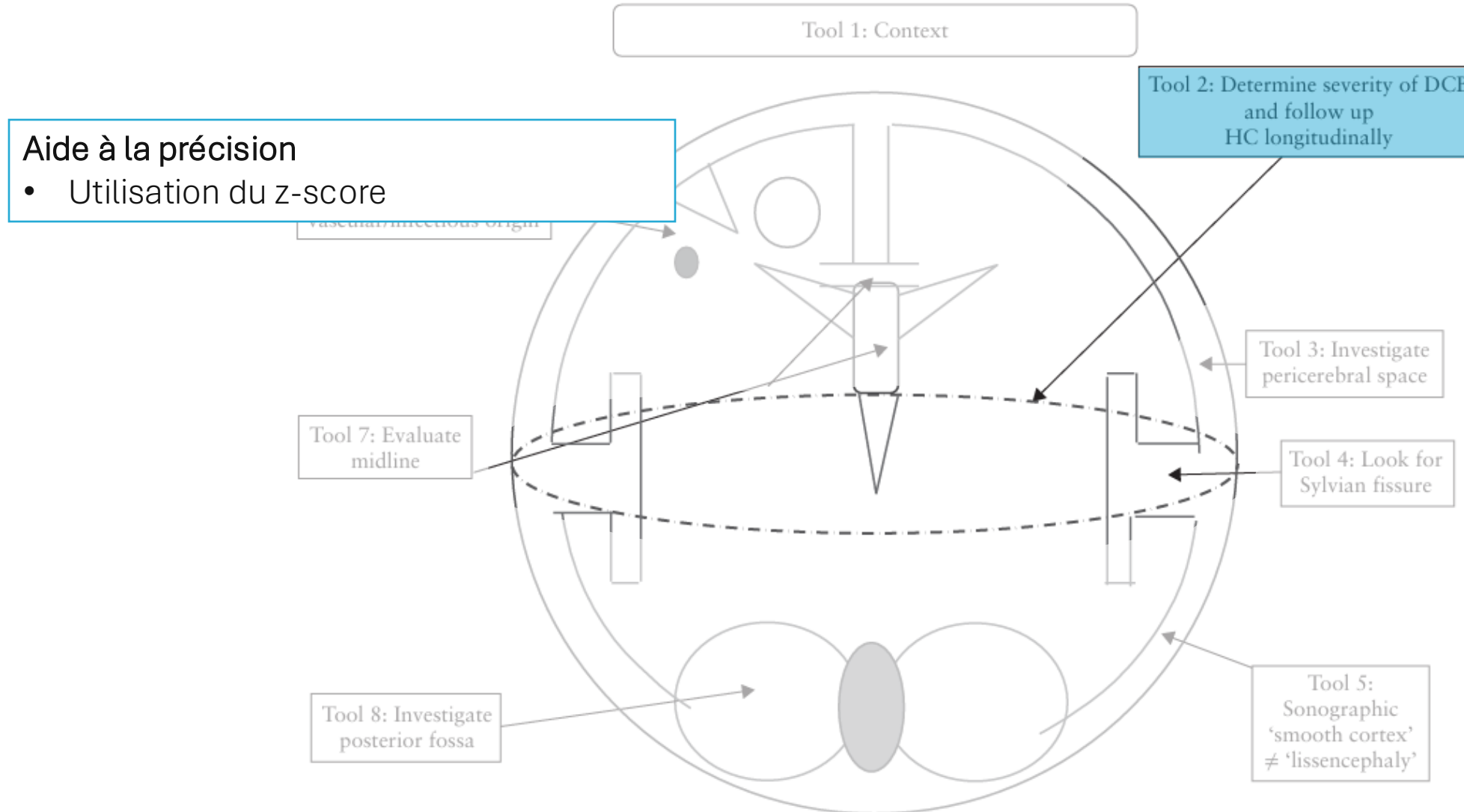
Tool 4: Look for Sylvian fissure

Tool 5: Sonographic 'smooth cortex' ≠ 'lissencephaly'

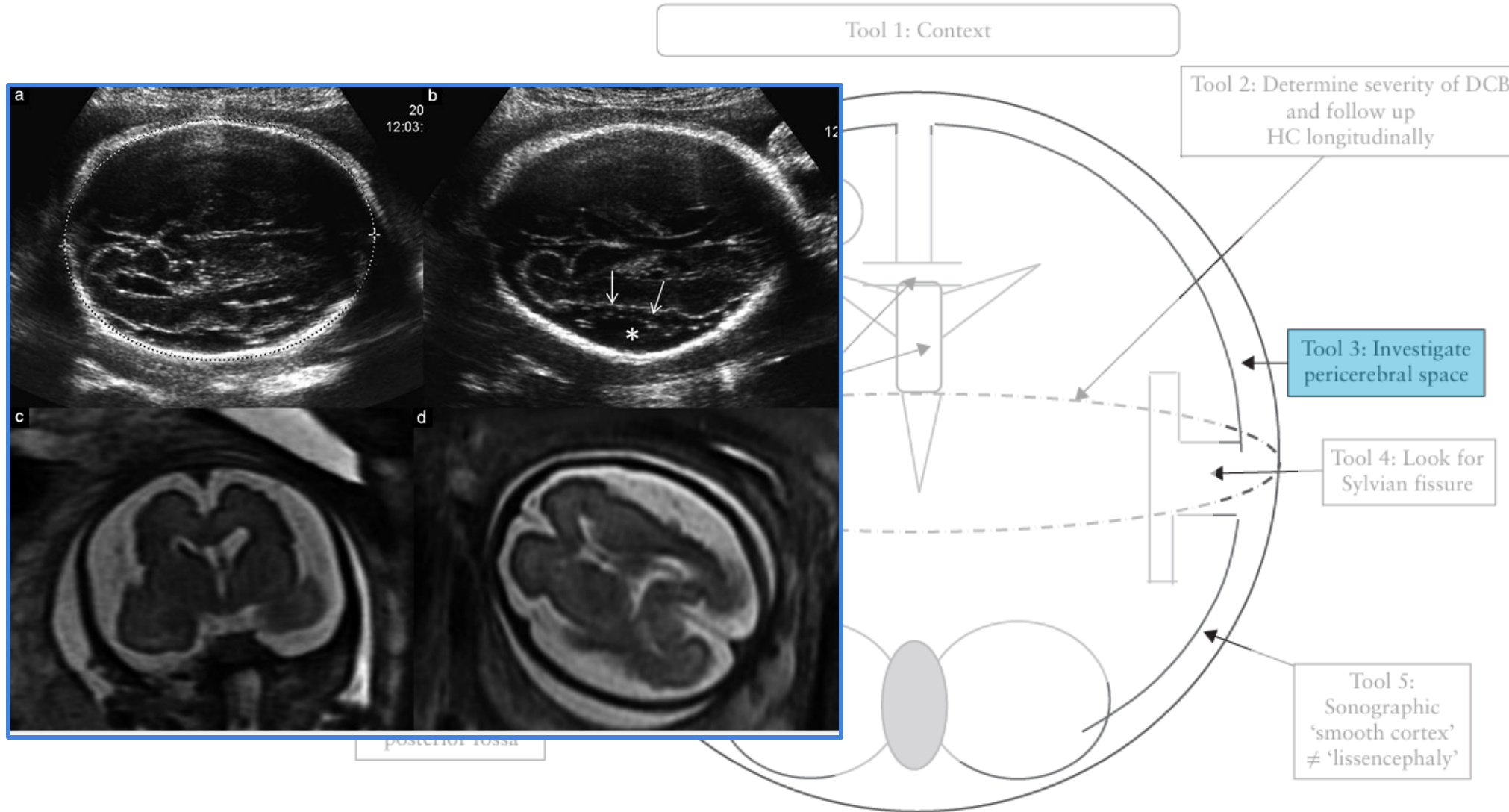
Tool 8: Investigate posterior fossa



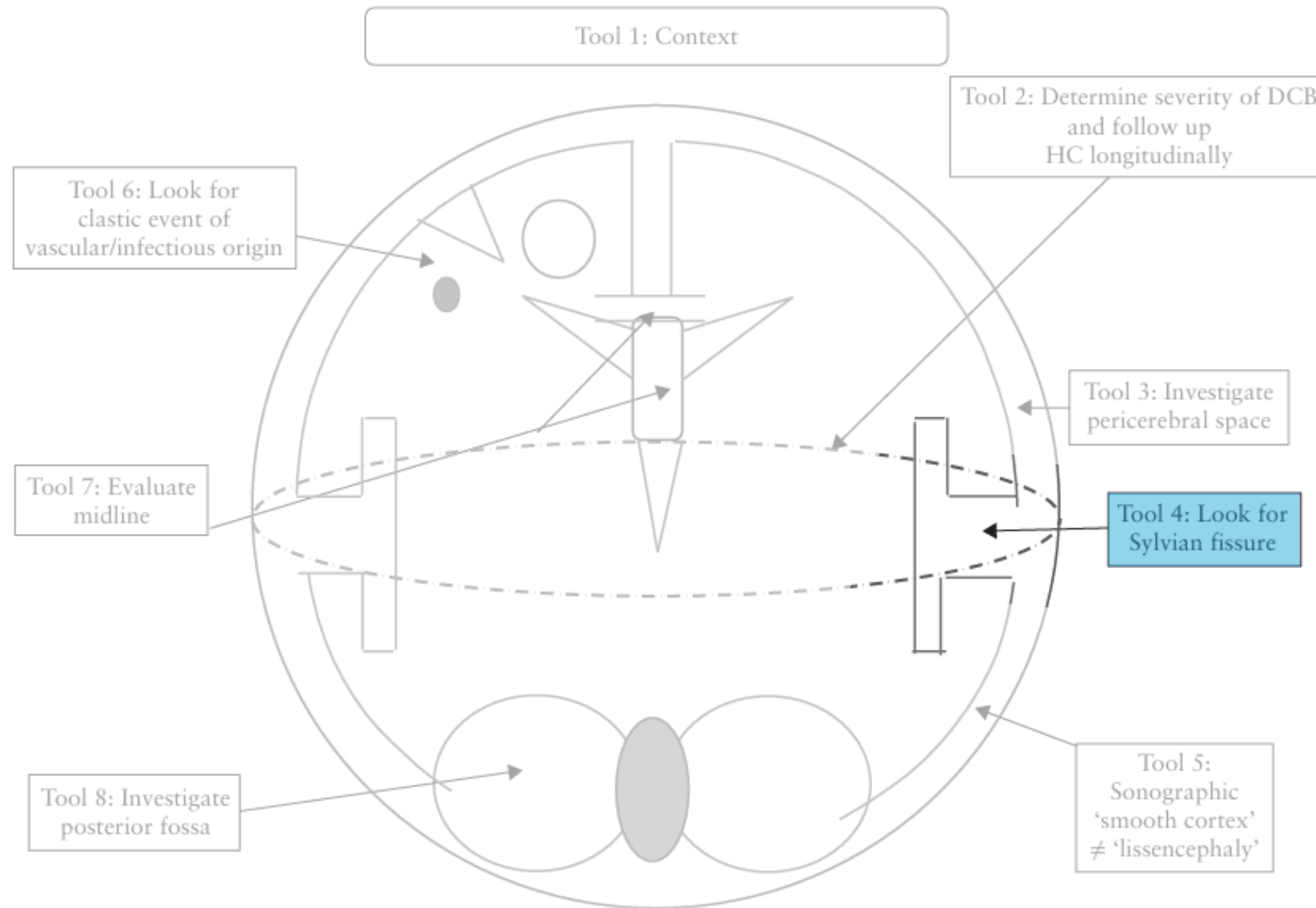
Analyse systématique SNC – Z-Score



Analyse systématique SNC – Espaces péricérébraux

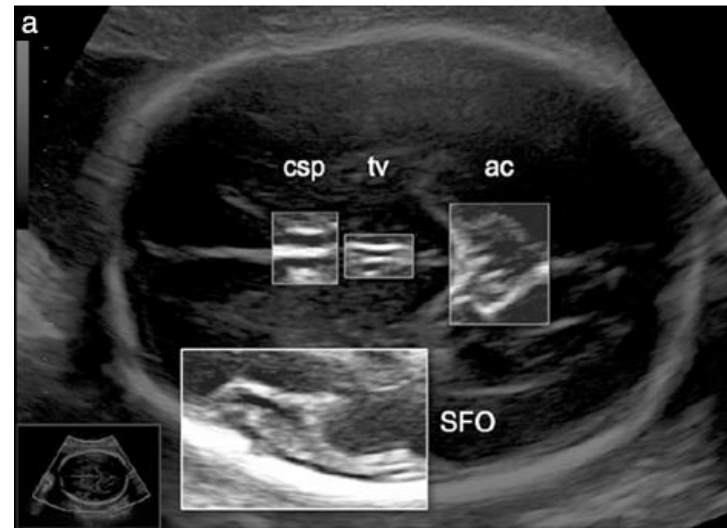


Analyse systématique SNC – Vallée sylvienne

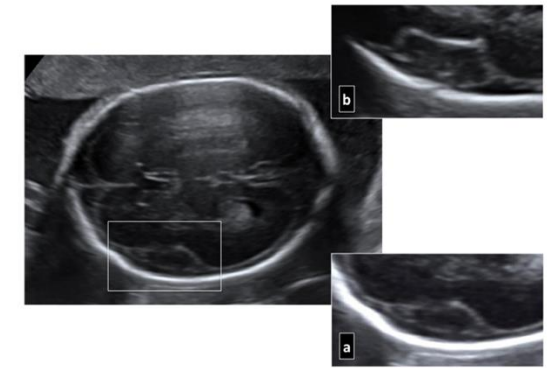


Vallée sylvienne

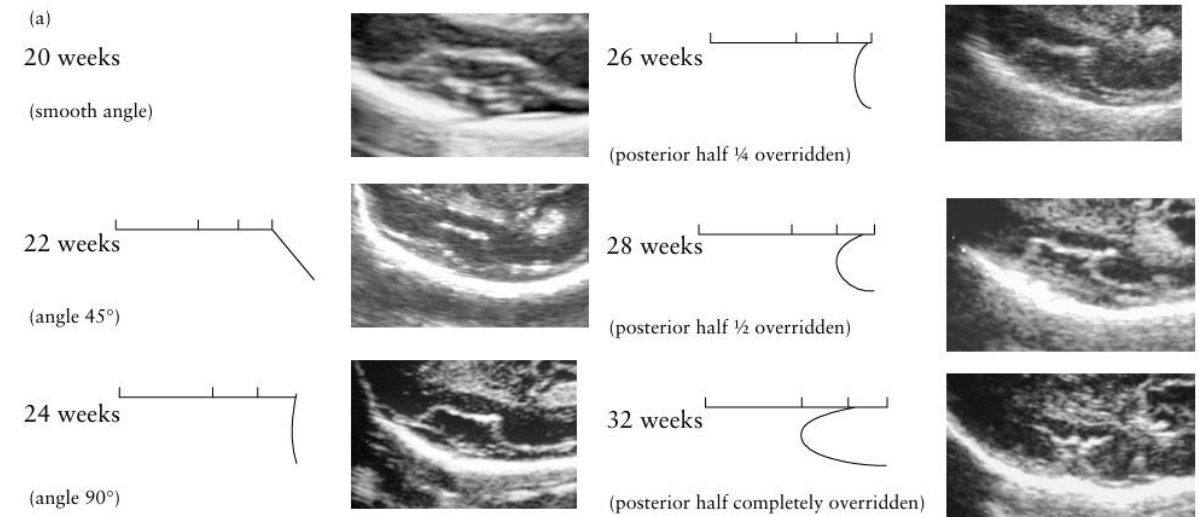
- Berge postérieure: principale marqueur gyration et maturation cérébrale
 - Anomalie dvpt corticale (lissencéphalie) ou lésions clastiques (polymicrogyrie)
- Berge antérieure: Volume cérébrale** (si berge ant émoussée peut révéler une hypoplasie frontale)



Quarellero

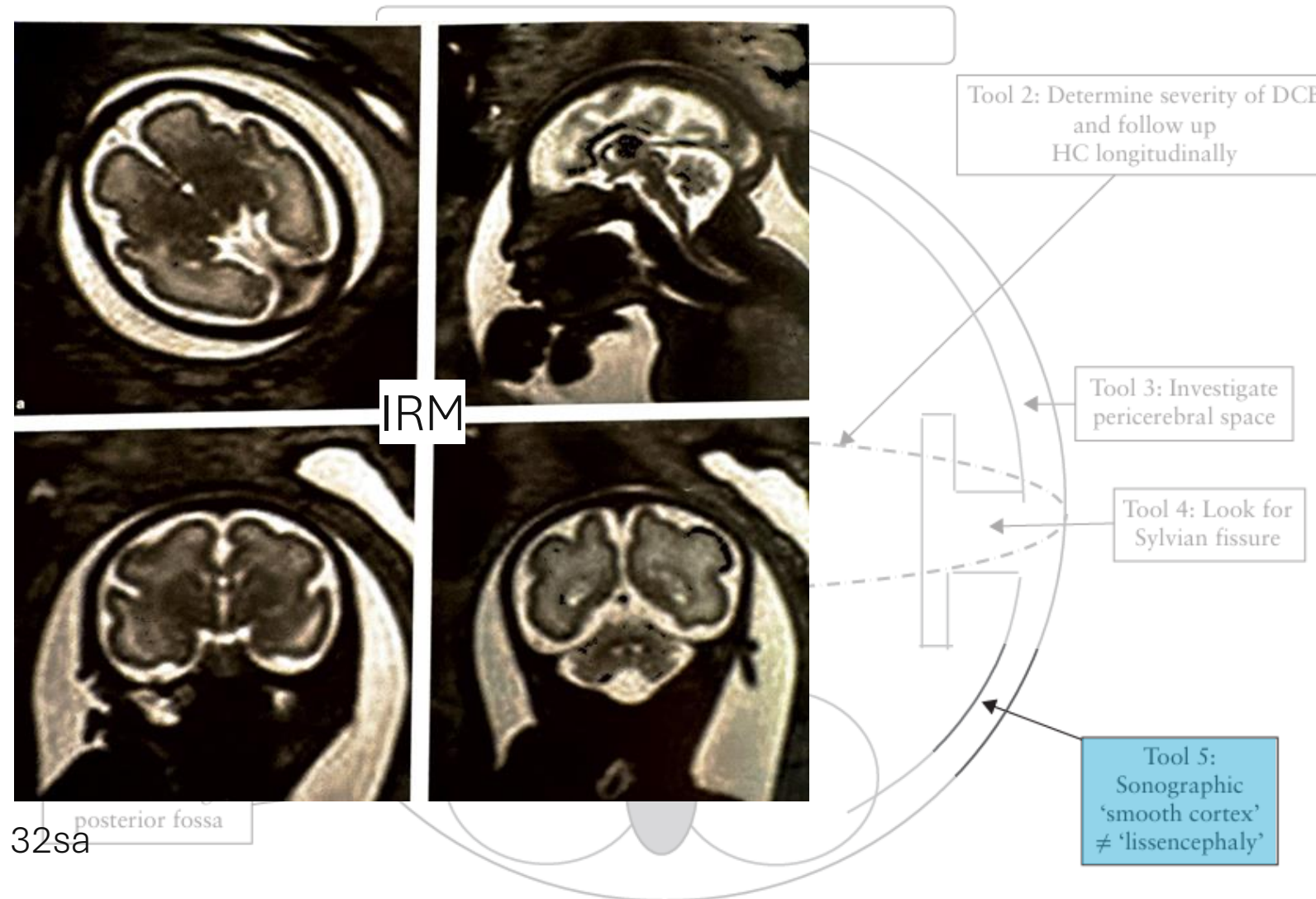


Mace

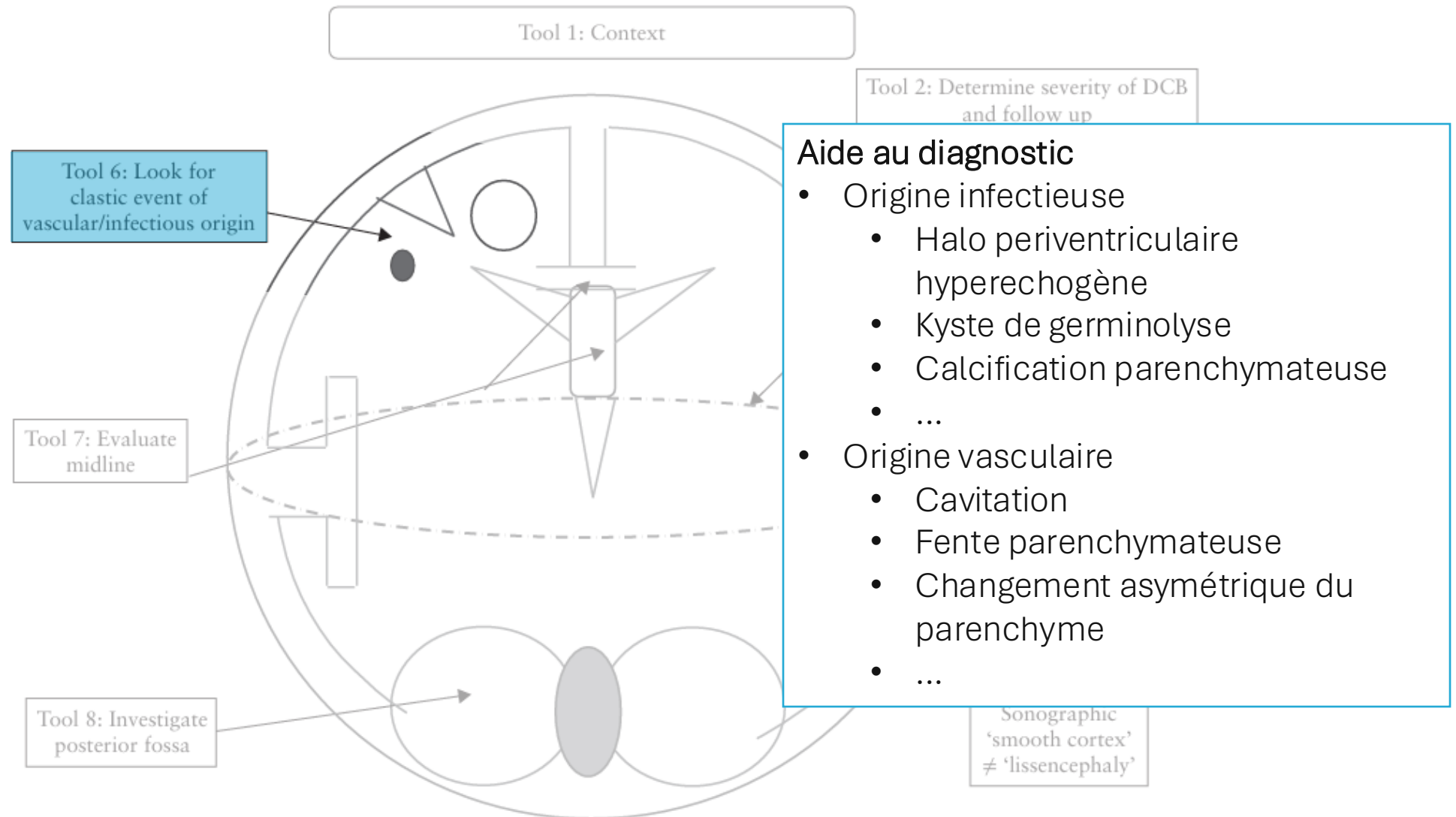


Guibaud

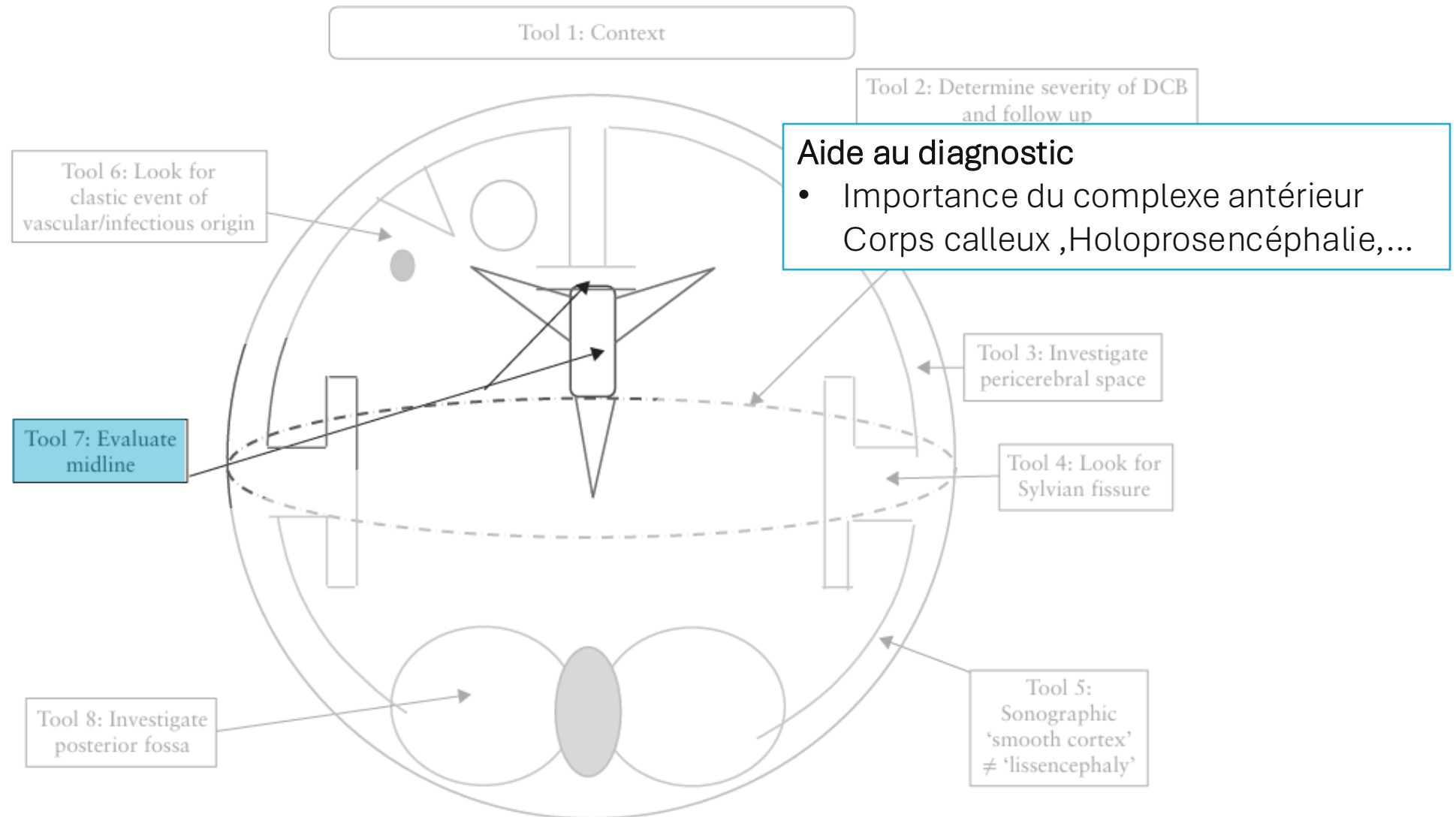
Analyse systématique SNC – “cortex lisse”



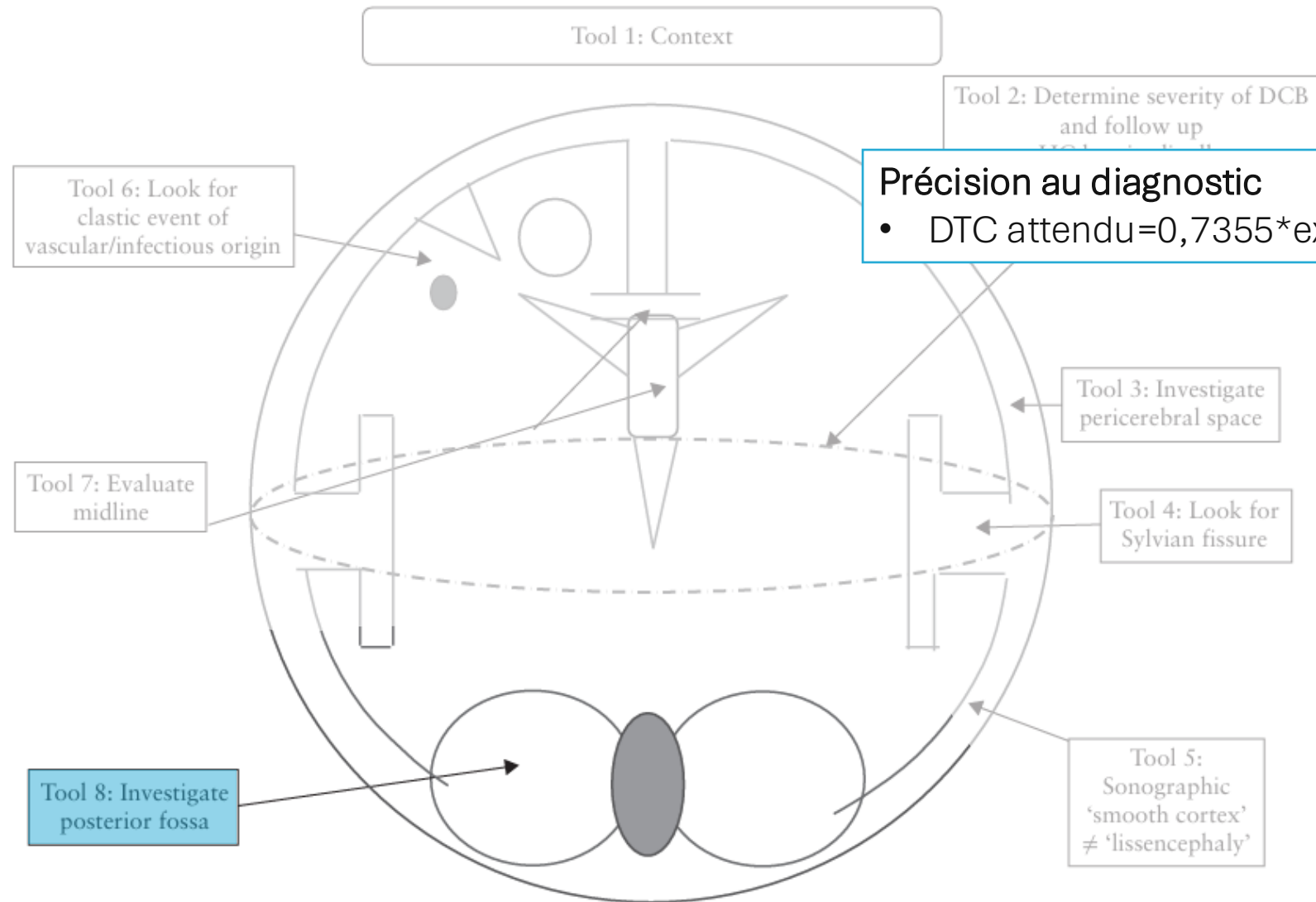
Analyse systématique SNC – événements clastiques



Analyse systématique SNC – Ligne médiane



Analyse systématique SNC – Fosse postérieure



Précision au diagnostic

- $DTC_{attendu} = 0,7355 * \exp(0,059 * HC)$

Massoud

Démarche & Conclusion

