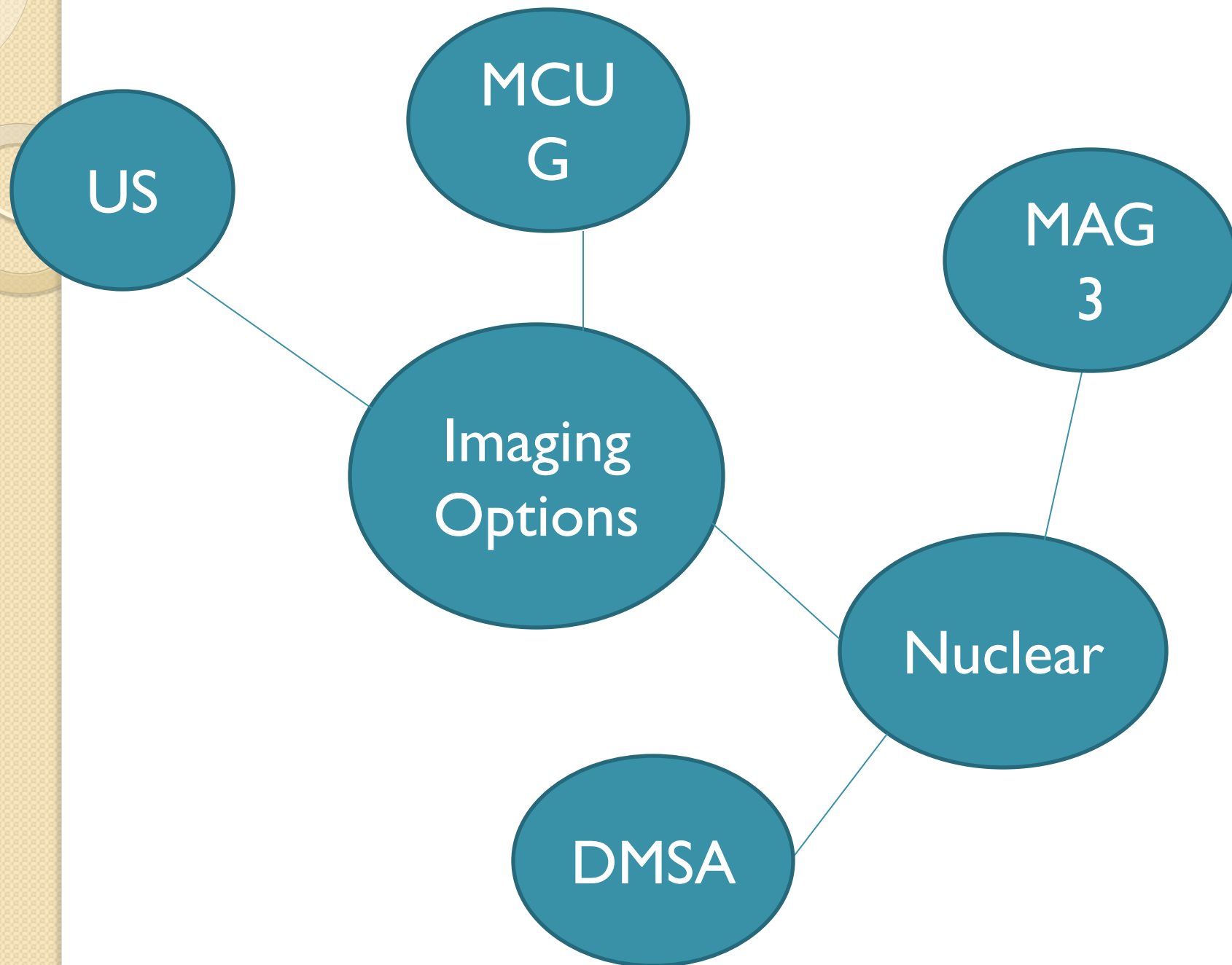


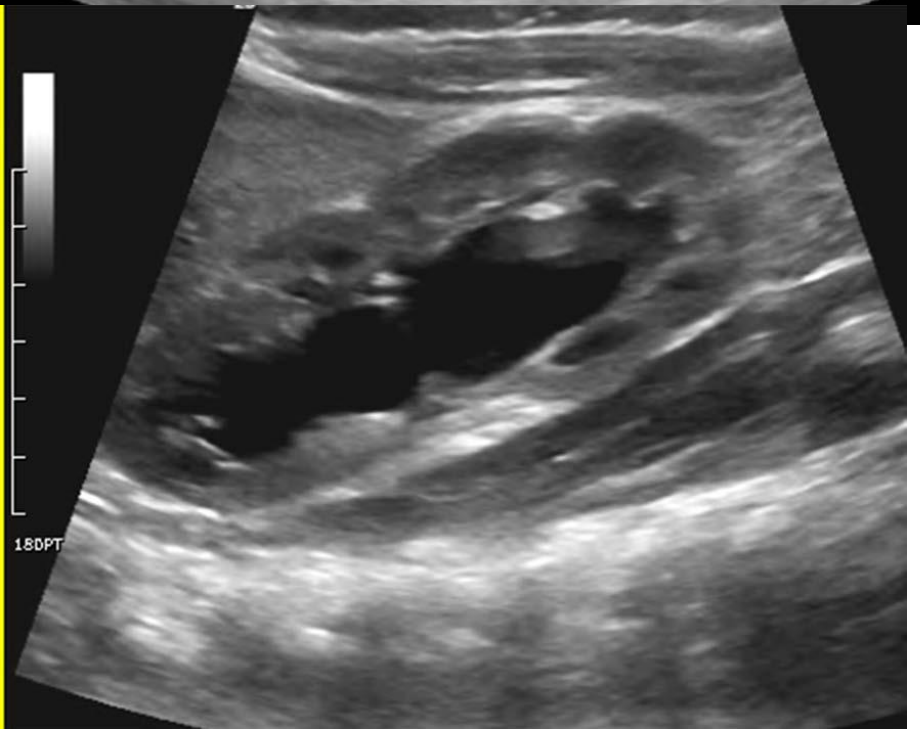


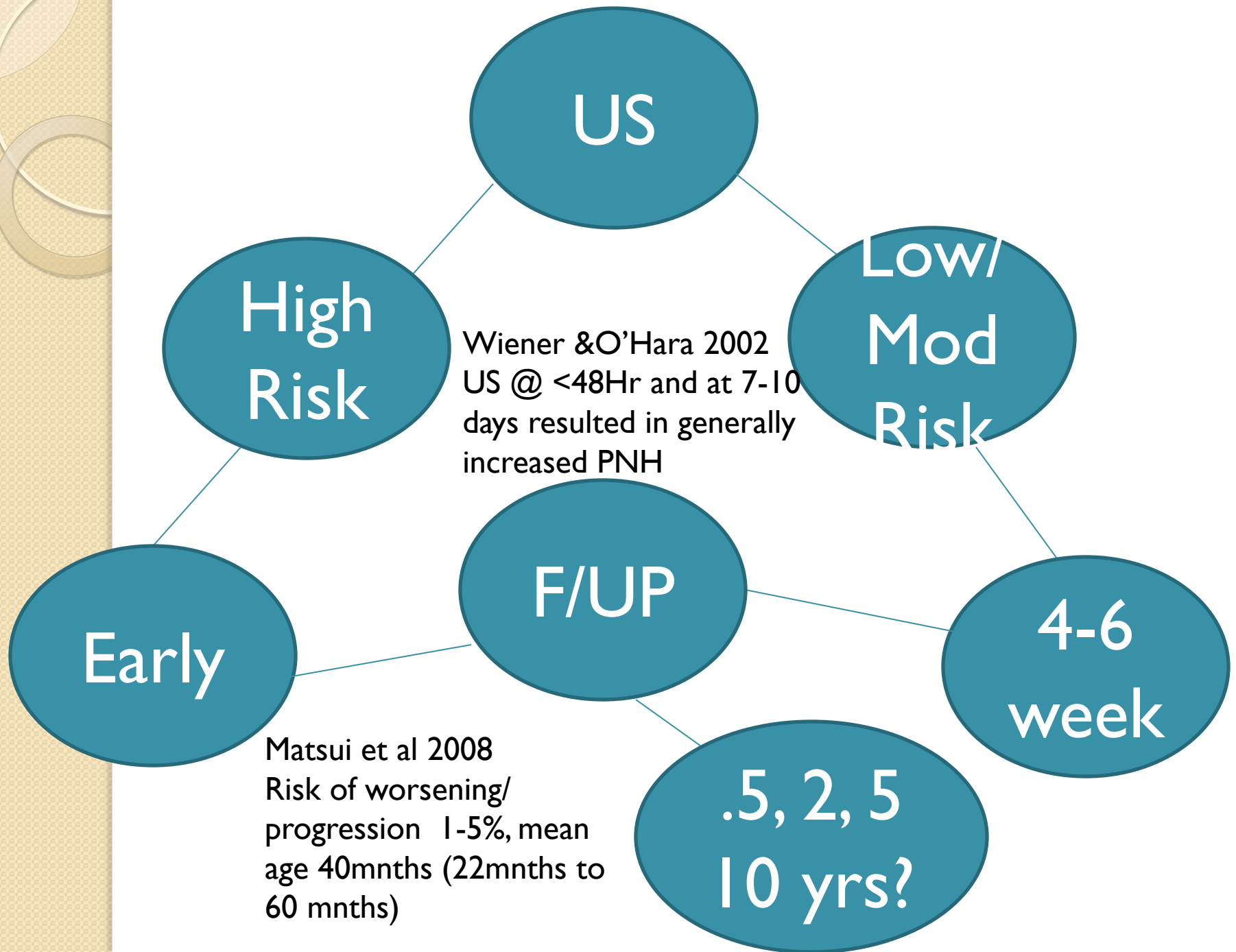
Postnatal Imaging of Antenatally Detected Hydronephrosis

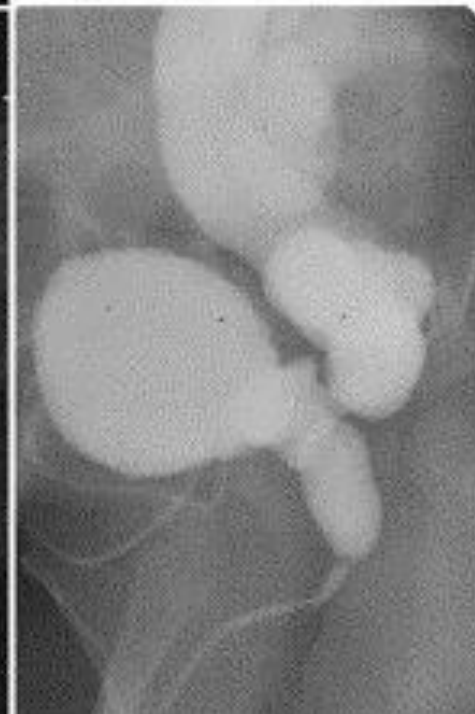
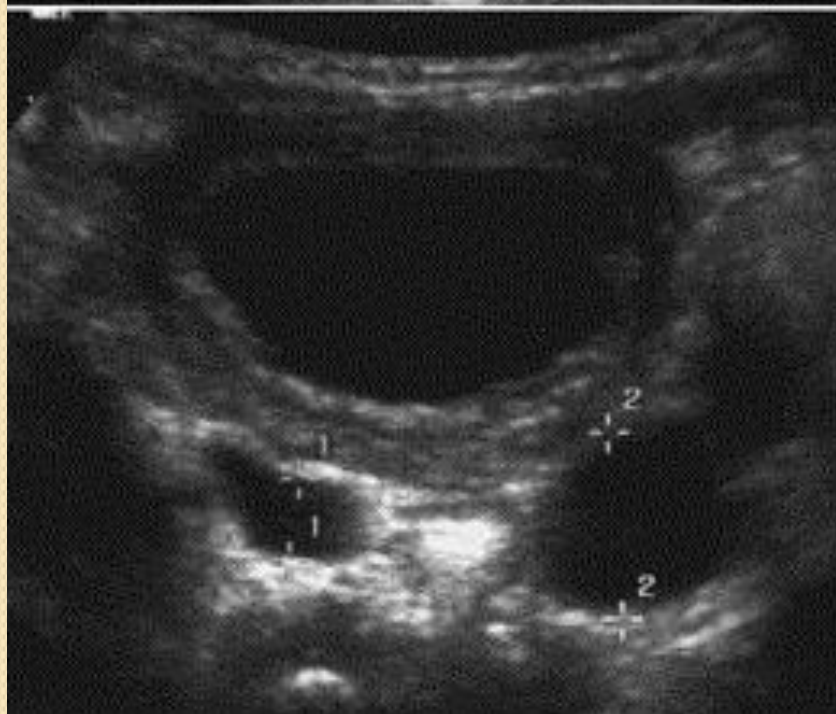
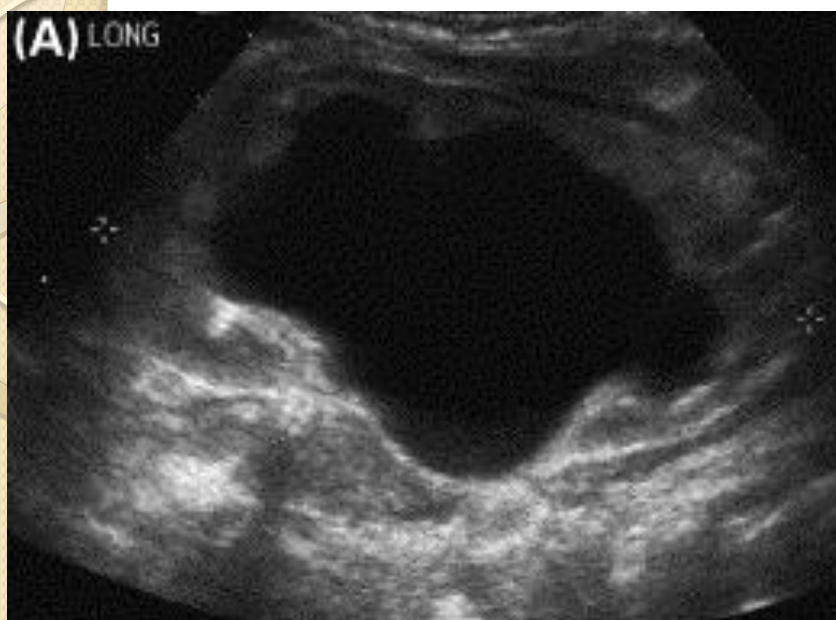
Sumit Jagani

Queens Medical Centre









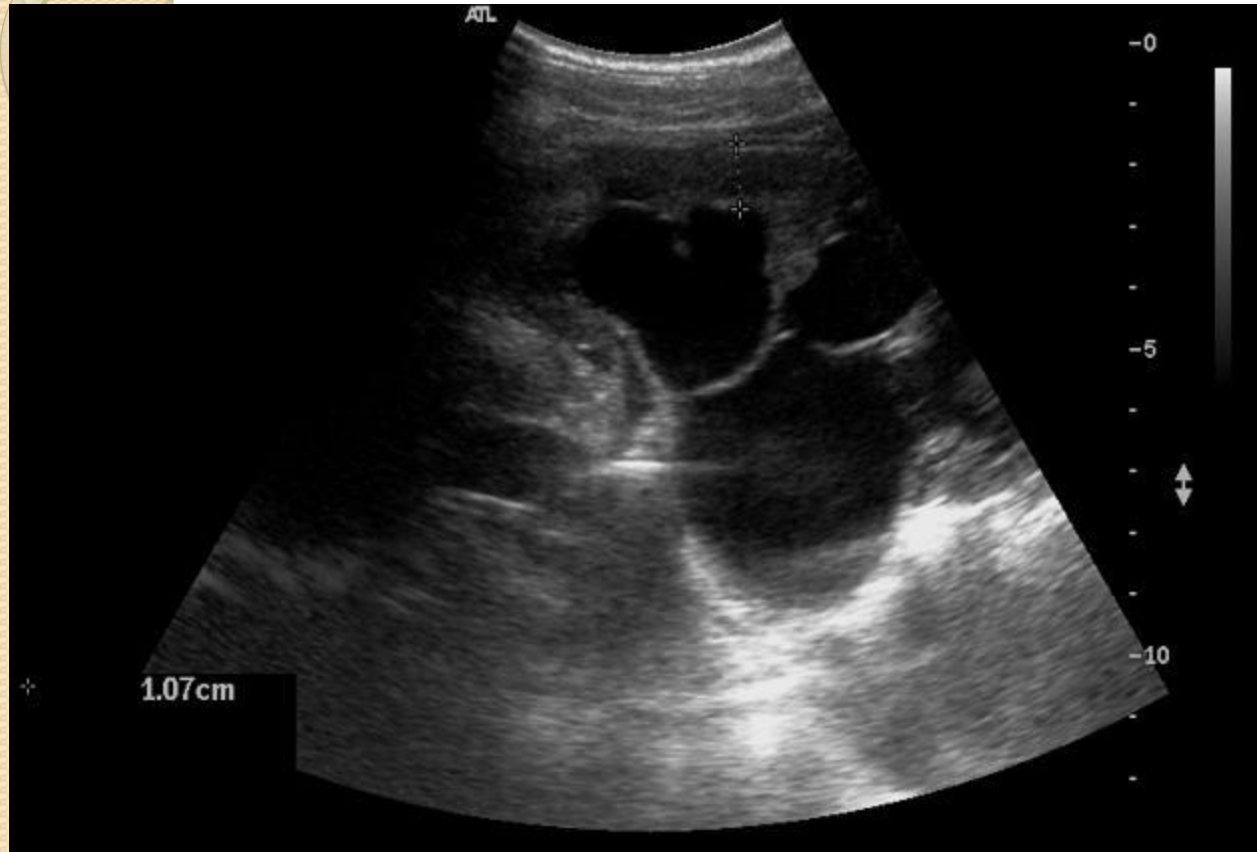
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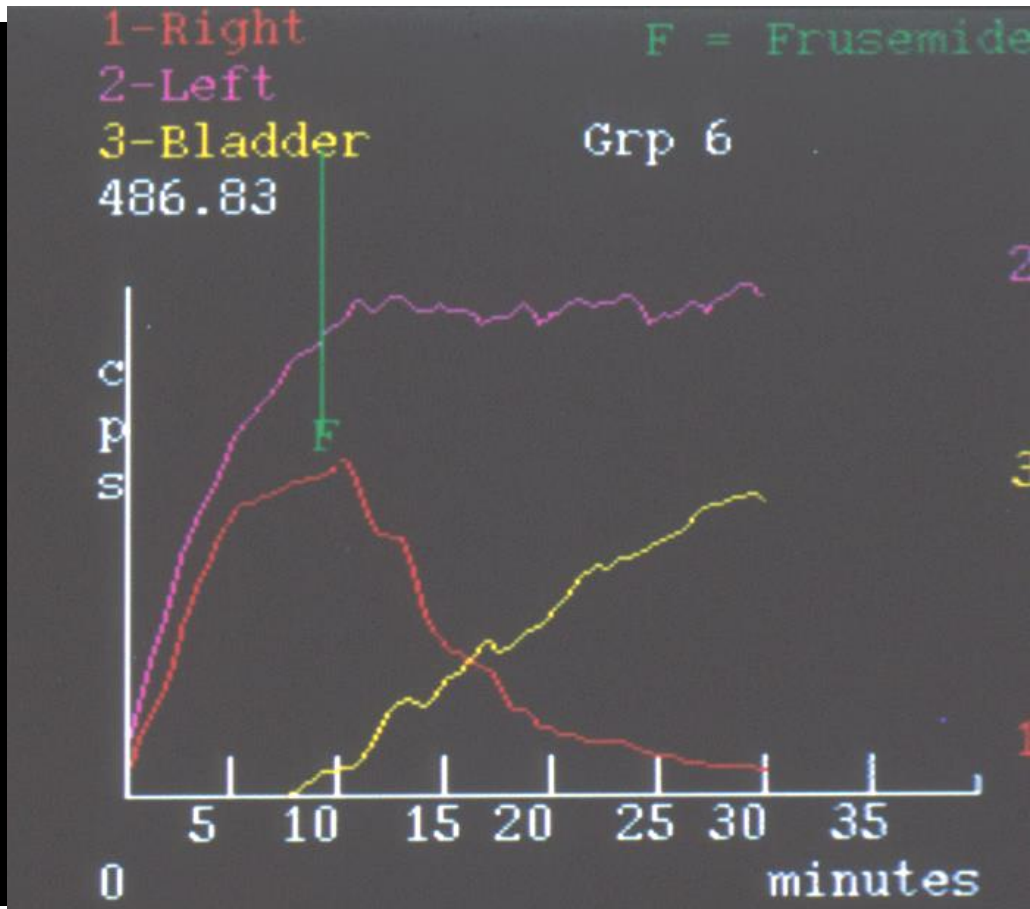
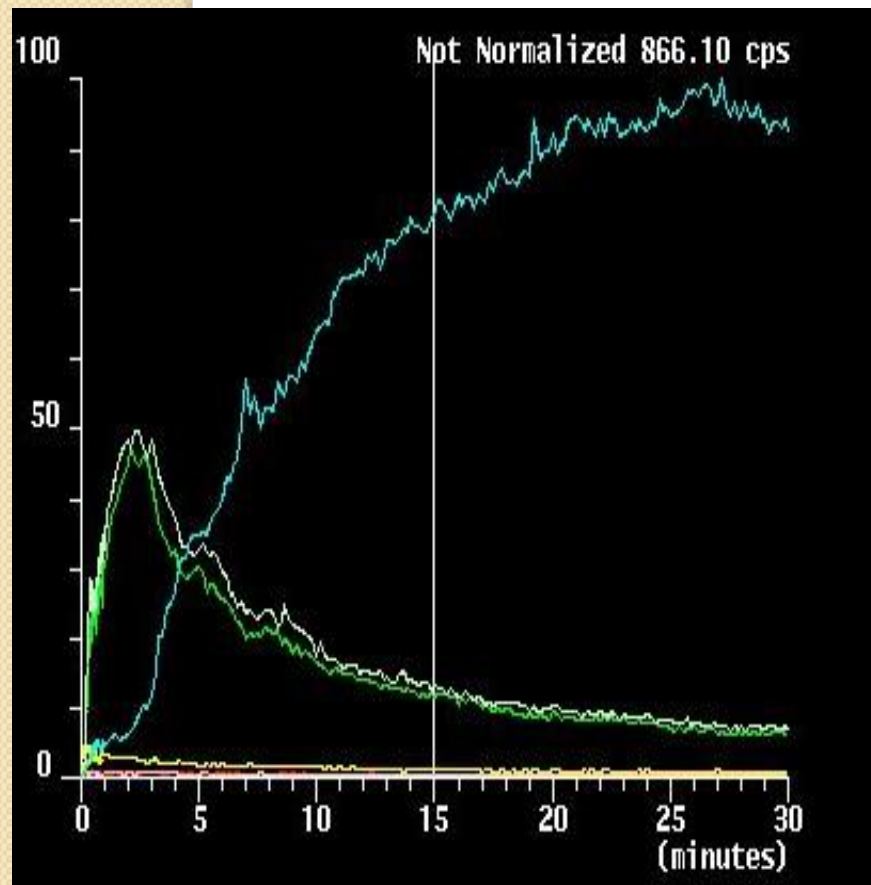
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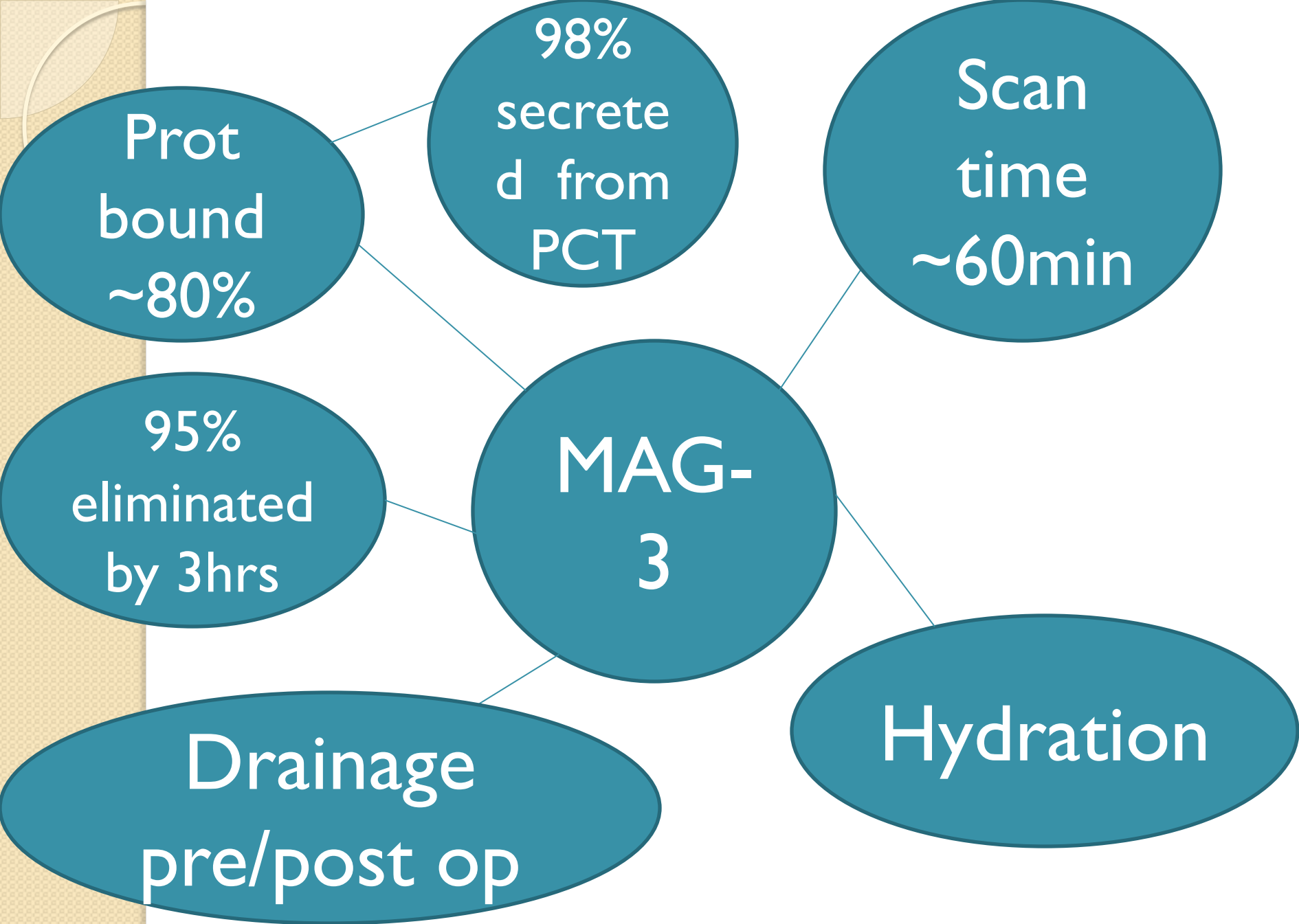


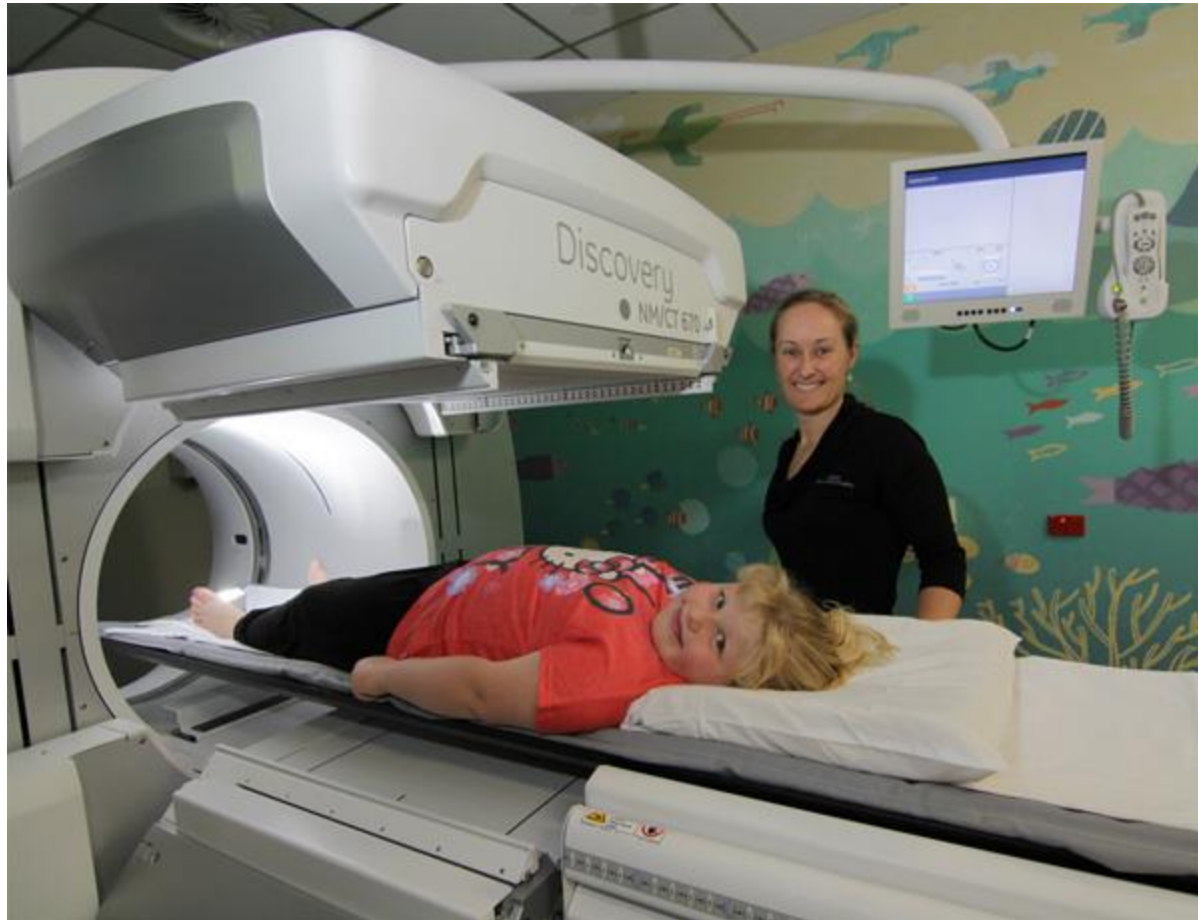
MAG 3 (mercaptoacetyltriglycine)



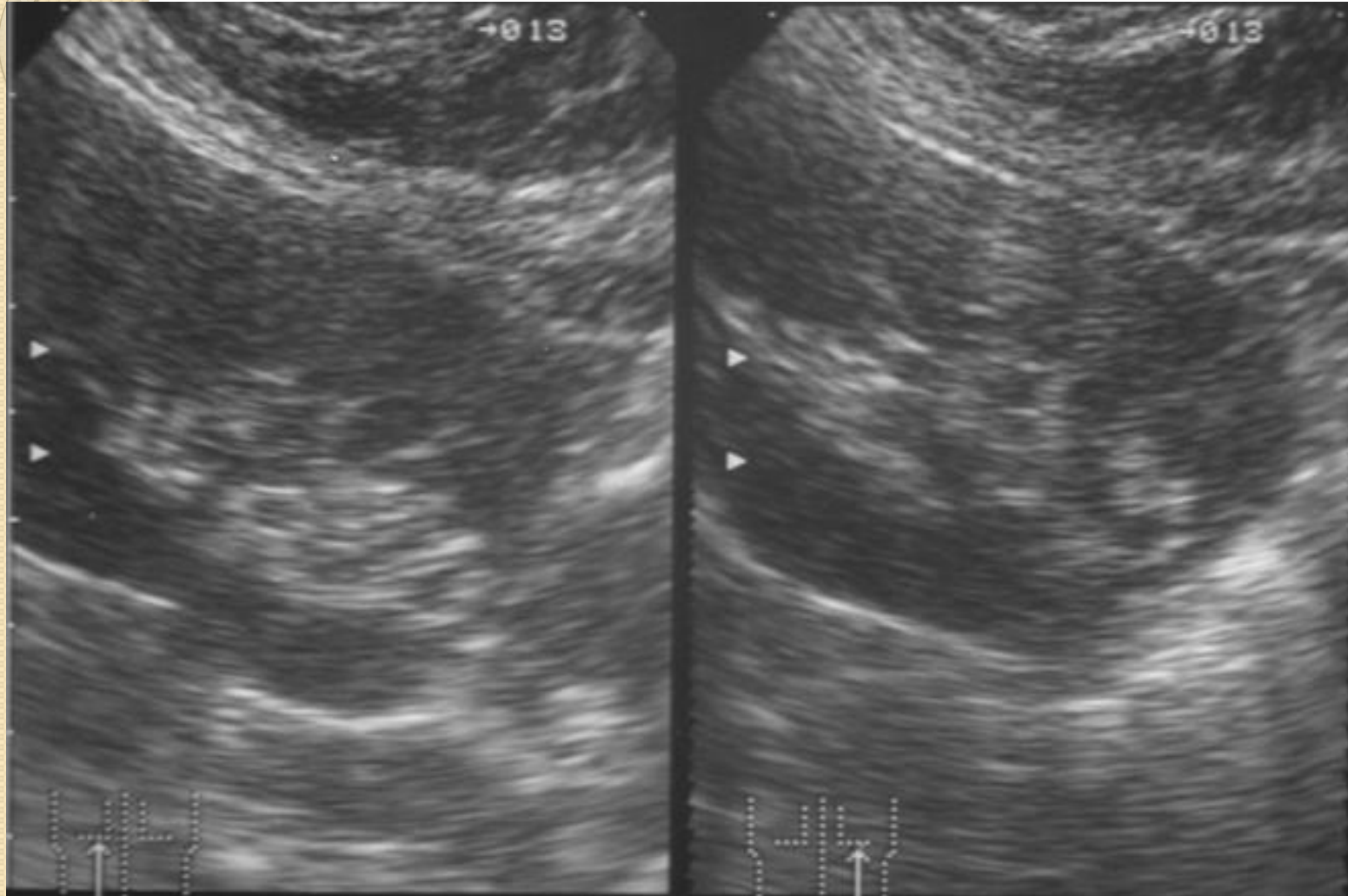
MAG 3 (mercaptoacetyltriglycine)



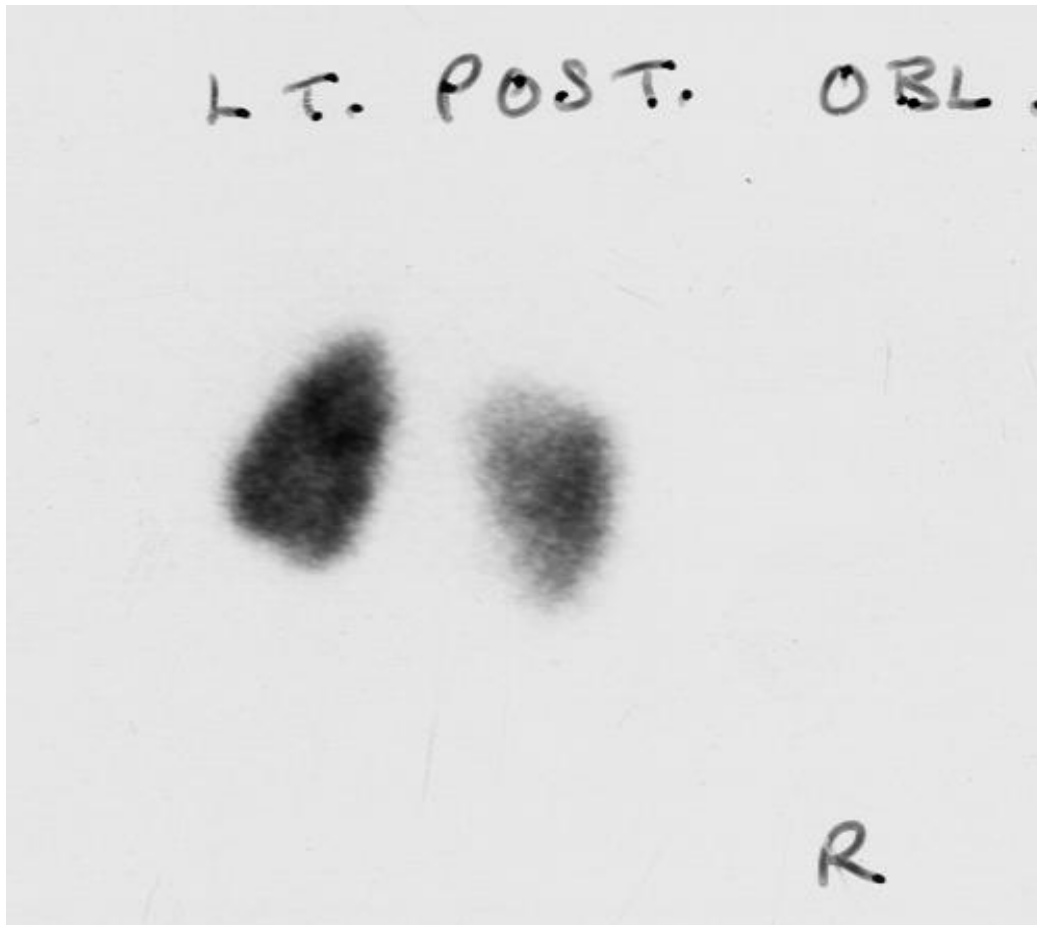




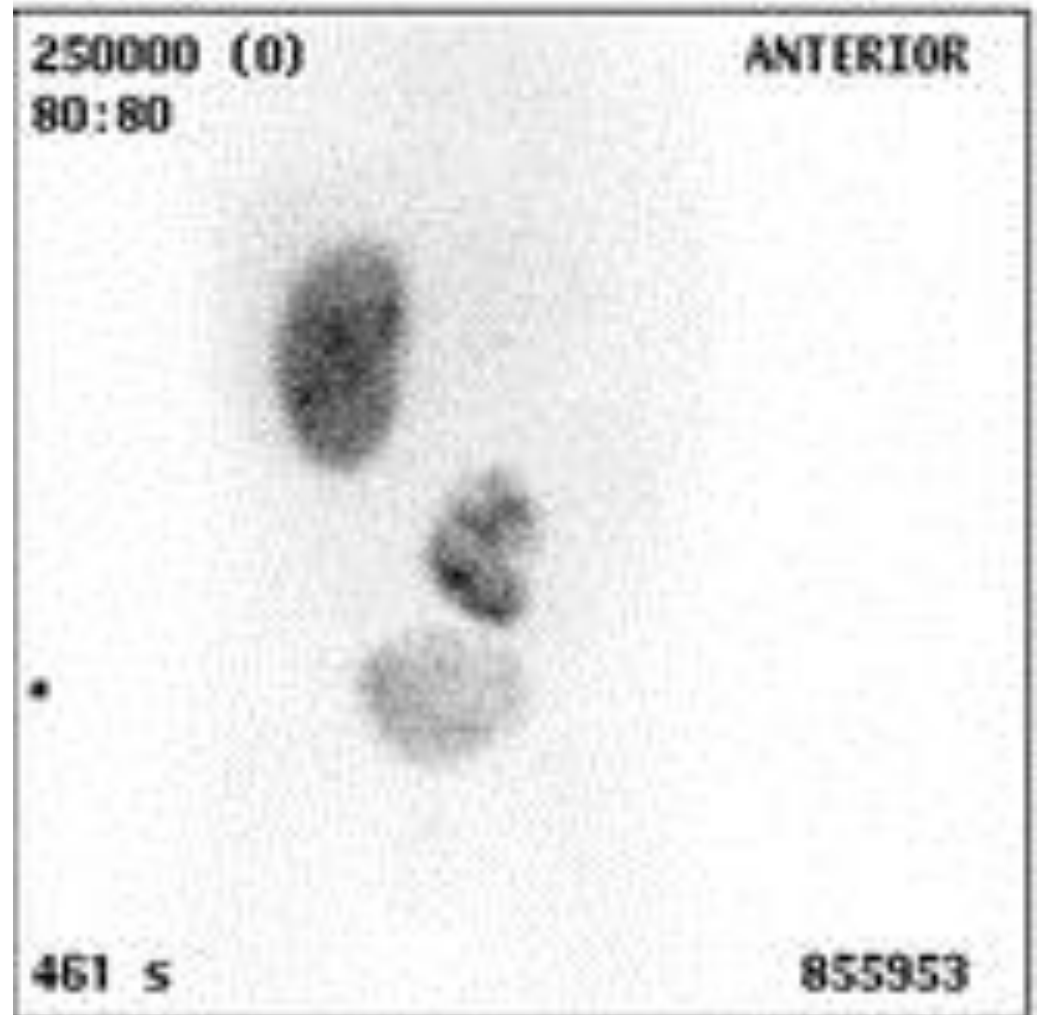
DMSA (dimercaptosuccinic acid)

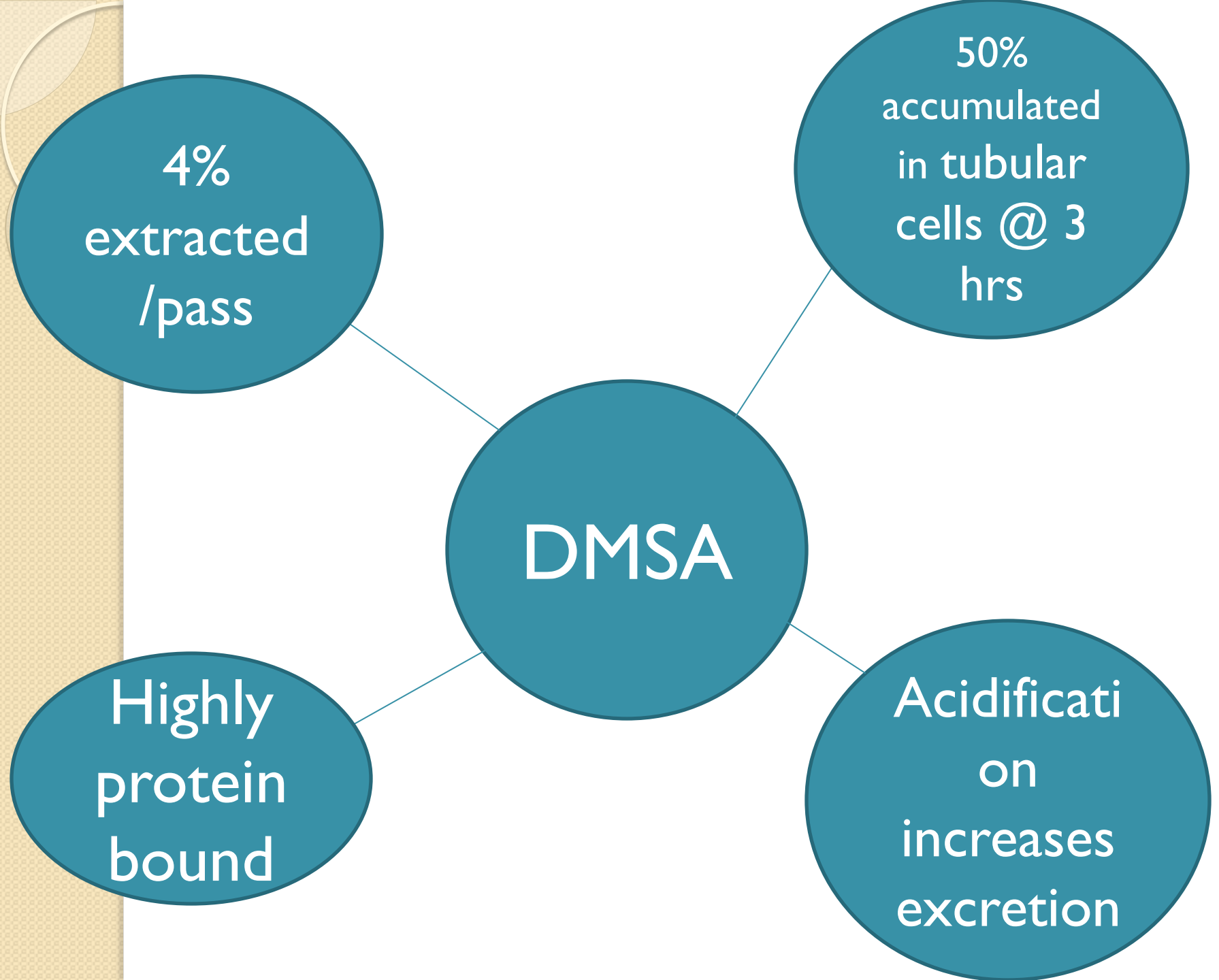


DMSA (dimercaptosuccinic acid)

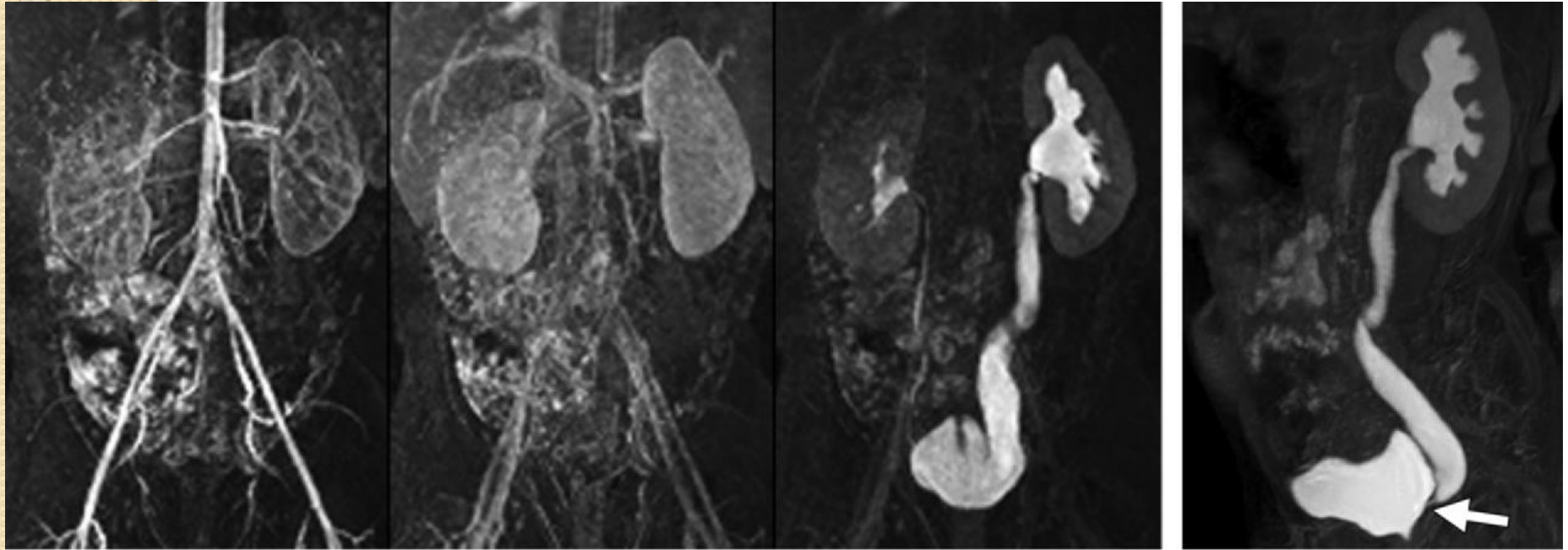


DMSA (dimercaptosuccinic acid)

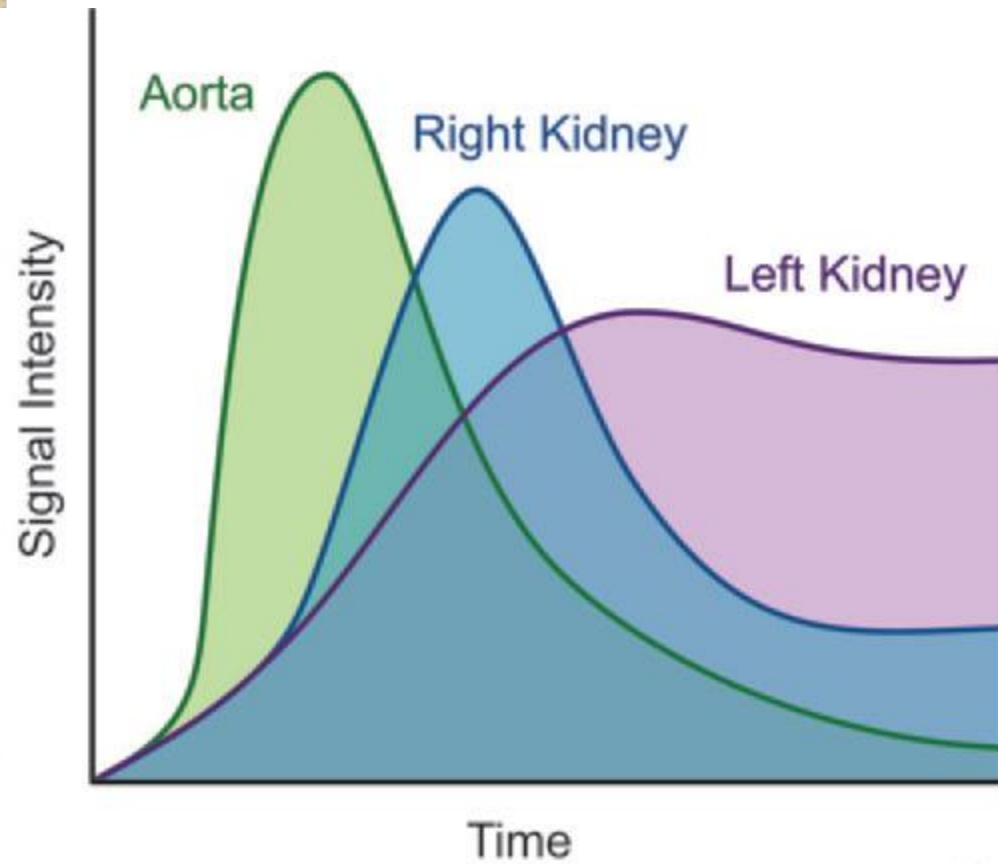




MRU

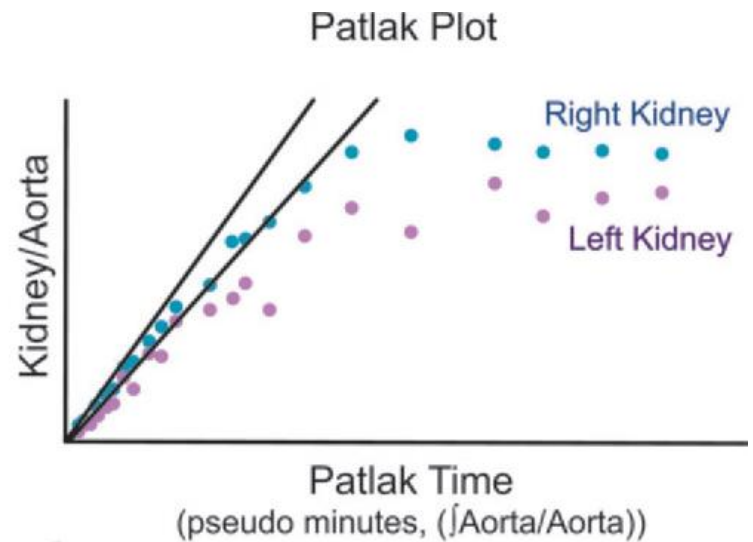


MRU



MRU

	Right Kidney	Left Kidney
Volume differential function (%)	51	49
Patlak differential function (%)	65	35
Calyceal transit time	2 min, 40 sec	3 min, 50 sec
Renal transit time	3 min, 30 sec	6 min, 20 sec
Patlak GFR (per ml renal tissue)	0.9 ml per min	0.48 ml per min



MRU Functional Analysis

- Antenatal hydronephrosis
 - 1-5% of pregnancies

	2 nd Trimester (mm)	3 rd Trimester (mm)	Risk of Postnatal pathology
Mild	4 to <7	7 to <9	~12%
Moderate	7 to 10	9 to 15	~45%
Severe	>10	>15	~88%
(Nguyen HT, et al. J Pediatr Urol 2010;6:212-231)			Lee SR et al. Paediatrics 2006;118(2)

Summary

- US is the workhorse for renal imaging
- Avoid early US unless high risk factors
- No US features reliably predict VUR

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