



Common and Weak Subgroups of Blood Group A

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COMMON SUBGROUPS

- A₁ (~80%) and A₂ (~20%)
- Diagnostic identification
- Antigens: Relative amount of H antigen present varies
Biochemical characteristics varies
- Transfusion issues

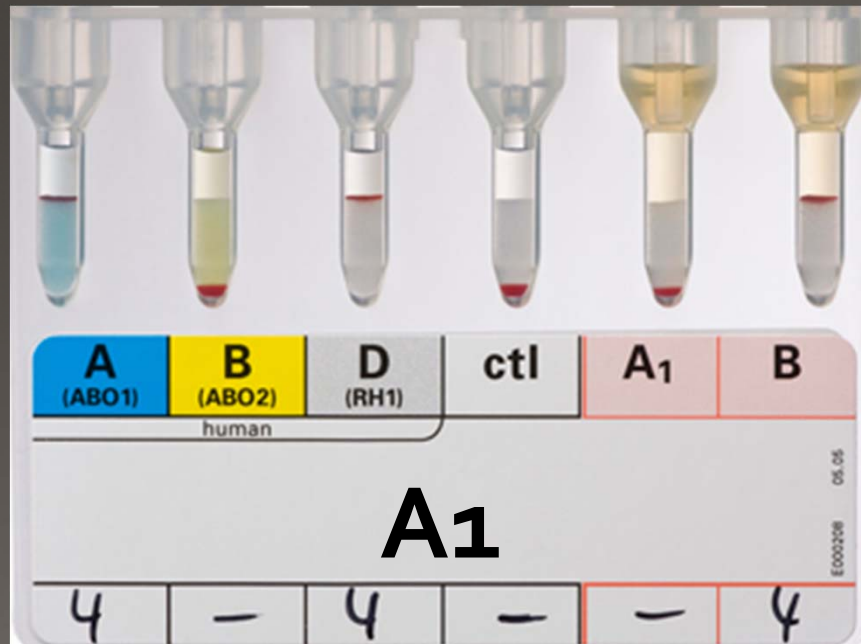


Image: P.Ellery Lecture Notes



Image: Medlabgeek, 2016

WEAK SUBGROUPS

- Many different 'weak' subgroups
- Antigens: Relative amount of H antigen present varies
Biochemical characteristics varies
- Diagnostic identification
- Transfusion issues

Phenotypes	RBC Antigen Density	anti-H
A ₁	100%	0
A ₂	29%	3+
A ₃	3.6%	3+
A _x	0.6%	4+

A₃ DIAGNOSTIC PRESENTATION

Forward mixed field (dcp) group A with reverse group A

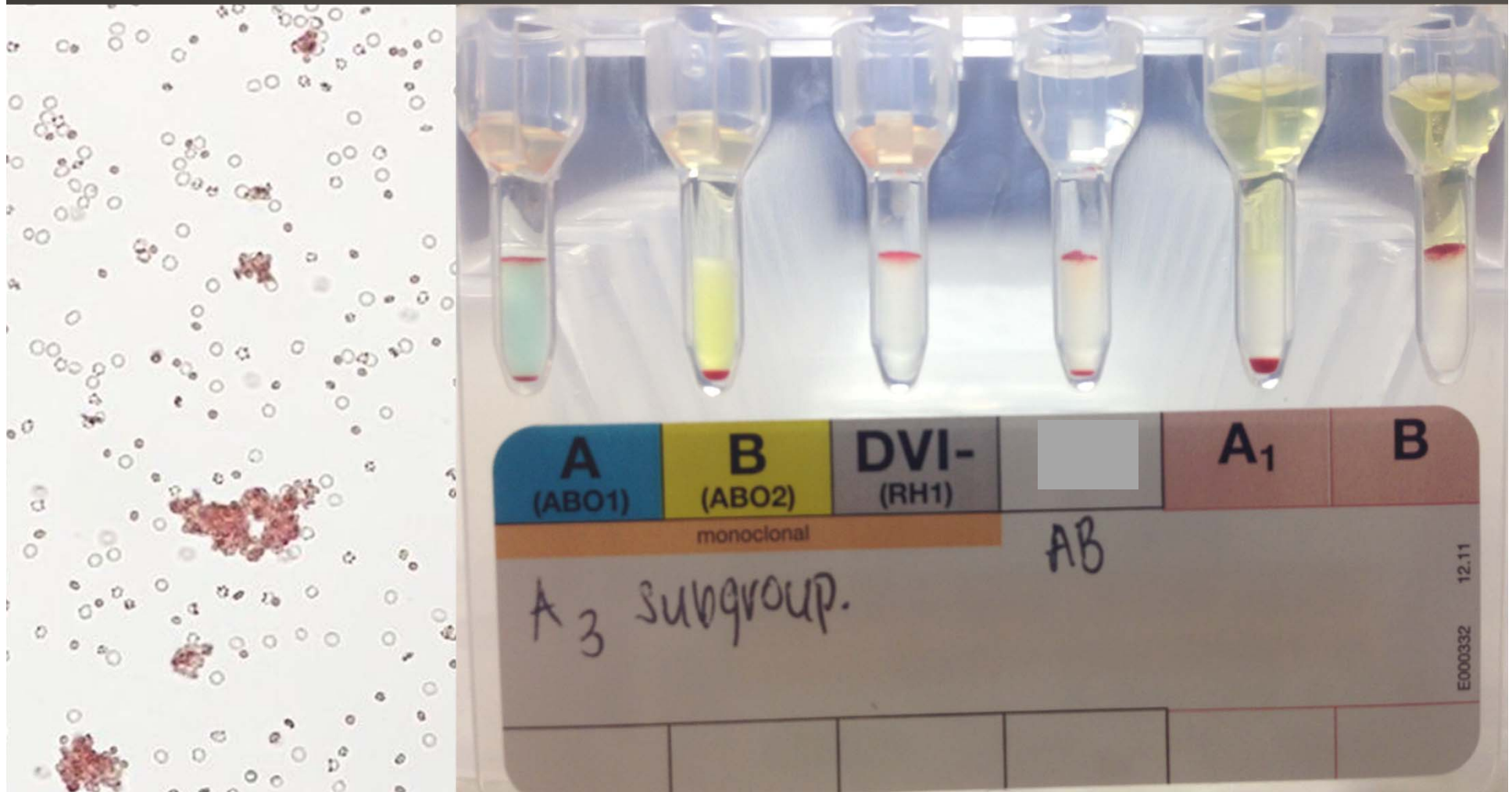


Image: P.Ellery Lecture Notes

Image: Sims (2016) A₃ Diagnostic Presentation

Ax DIAGNOSTIC PRESENTATION

Forward group O, reverse group A

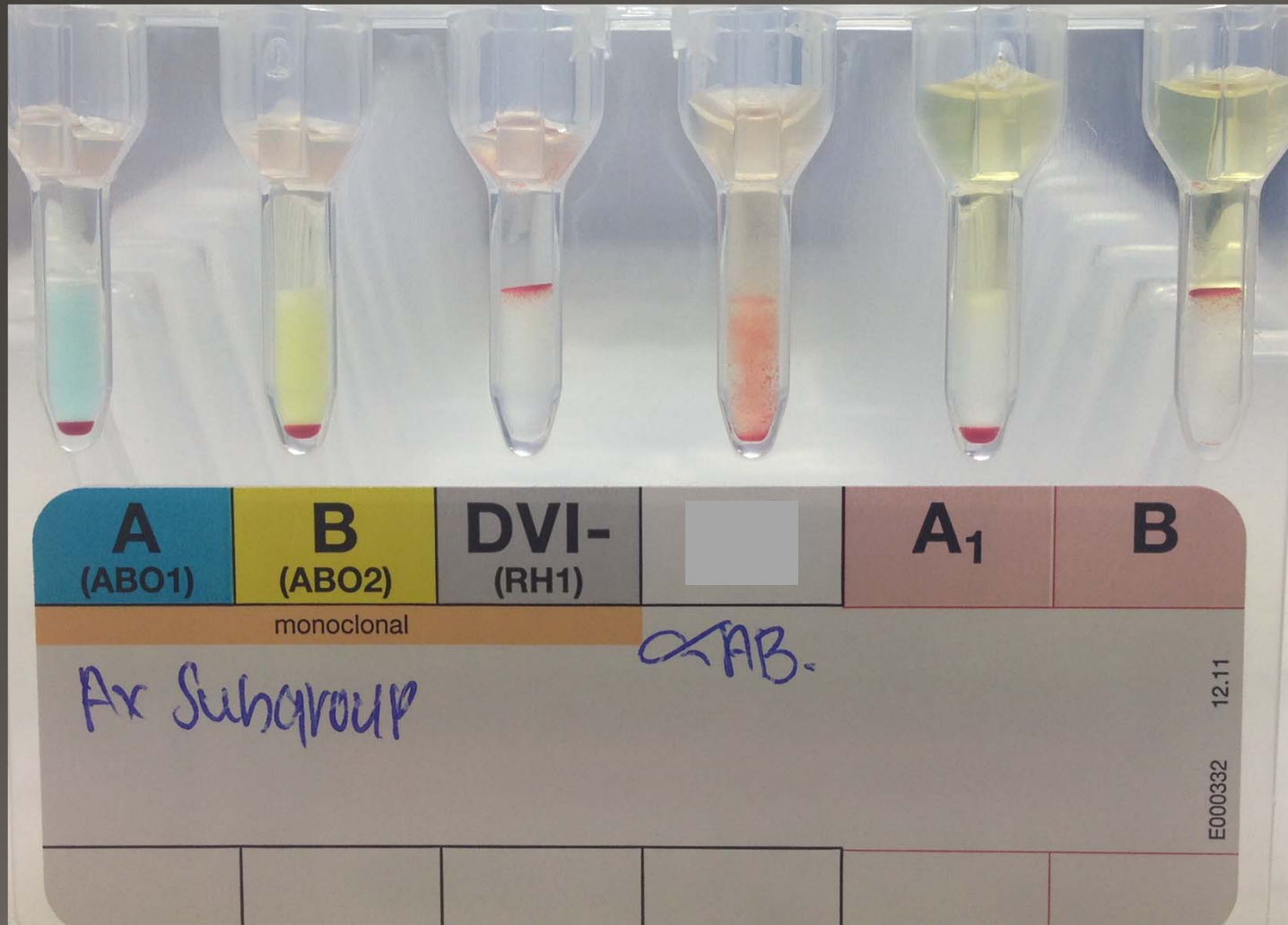


Image: Sims (2016) Ax Diagnostic Presentation

SUMMARY

- Many different subgroups
- ABO discrepancy checklist
- Weak subgroup occurrence
- Transfusion issues

Phenotypes	anti-A	anti-AB	anti-H	RBC Antigen Density
A ₁	4+	4+	0	100%
A ₂	4+	4+	3+	29%
A ₃	2+ mf	2+ mf	3+	3.6%
A _x	wk/o	2+	4+	0.6%

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QUESTIONS



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THANK YOU:

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