

IACC 2023 Case-based discussion (CBD) scenario

Specialty:	Blood Sciences: Clinical Biochemistry
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CBD Scenario

CBD Scenario Title	Interpretation of Thyroid Function Test Results										
CBD Scenario Aim	The trainee should demonstrate the ability to interpret clinical results in context with the clinical scenario and with knowledge of laboratory methodology.										
CBD Focus (please provide the codes of the module(s) this scenario addresses)	SLS126										
GSP Domains covered (enter X to indicate all that apply)	GSP 1	X	GSP 2	X	GSP 3	X	GSP 4		GSP 5		
CBD Scenario description	<p>You are contacted by a GP who requires advice regarding the interpretation of some thyroid results for two different patients.</p> <p>a) 24-year-old female patient with a history of vomiting. TSH - <0.01 IU/L (0.5-5.0) fT4 – 18.2 pmol/L (10-24)</p> <p>b) 32-year-old male patient with clinical history of palpitations and tachycardia. TSH – 7.5 IU/L (0.5-5.0) fT4 – 35 pmol/L (10-24)</p>										
CBD Scenario model answer/ assessor guidance Detailed guidance that will be available for the assessors. Include guidance on what kinds of behaviours, actions, comments should secure a pass. What should the assessor expect to see? Assessors will be asked to plan questions in	<p>a) 24 year old female patient with a history of vomiting. TSH - <0.01 IU/L (0.5-5.0) fT4 – 18.2 pmol/L (10-24)</p> <p>Suppressed TSH with a normal ft4. Look at previous results to see if the patient has a history of thyroid disease and if they have been given thyroxine or T3. Consider T3 toxicosis (add on a ft3). Could the patient be pregnant? Contact GP to gain permission for β-hCG add-on request. If patient is pregnant a good candidate will suggest requirement to use pregnancy associated reference ranges.</p>										

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<p>advance including links to trainee's IACC submission.</p>	<p>Further tests – fT3, βhcG, TSH receptor antibodies (might be appropriate) <i>P: if answer substantially correct and the trainees recognises that consent should be acquired to add certain tests;</i> <i>BP: -if the explanation is largely correct, but not all further investigations are considered.</i> <i>BF: if trainee does not interpret results in light of clinical details.</i> <i>F:Fail if the trainee is completely unclear</i></p> <p>b) 32 yr old male patient with clinical history of palpitations and tachycardia. TSH – 7.5 IU/L (0.5-5.0) fT4 – 35 pmol/L (10-24)</p> <p>Unusual pattern of results but clinical details do suggest the fT4 result is correct. Consider assay interference. Possible TSH secreting tumour adenoma or TRH secreting tumour. Further tests – alpha subunit analysis (TSHoma – alpha subunit would be high but normal in TSH resistance). Check for assay interference – repeat analysis using alternative assay, blocking tube analysis to exclude heterophilic antibody interference, PEG precipitation, <i>P: if answer substantially correct;</i> <i>BP: if the explanation is largely correct</i> <i>BF:if trainee does not interpret results in light of clinical details.</i> <i>Fail if the trainee is completely unclear about how to interpret and investigate the results</i></p>
<p>Trainee instructions</p> <p>Please include any specific information to be provided to the trainee as part of the CBD scenario</p>	<p>No additional instructions</p>

Criteria being assessed by this CBD scenario

Aspect	Please indicate if this criterion is being assessed
1. Understands the clinical context of the scenario, including priority setting and testing strategies	
2. Understands scientific principles of scenario	

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3. Can discuss the relevant procedures involved in the scenario and associated health and safety issues	
4. Understands and applies the appropriate test validation, IQC, EQA, relevant professional/clinical guidelines	
5. Understands and applies associated IT/bioinformatics and other appropriate resources	
6. Is able to interpret and report patient results and provide appropriate clinical advice	X
7. Can discuss the significance of patient results within the clinical context of the referral	X
8. Understands the ethical, legal and social implications of the scenario	X
9. Is aware of the importance of audit and can use this tool effectively	
10. Output meets accepted laboratory/professional standards	X
11. Demonstrates awareness of the limits of responsibility and when to seek advice	
12. Consideration of patient/professionalism	X
13. Overall ability to perform	