EQA Interpretative Scheme: iEQA

Friday 11th October 2013

Dina Patel

Deputy Director

UK NEQAS for Immunology, Immunochemistry & Allergy, Sheffield,

UK





What is interpretative EQA?

 External Quality Assessment that requires an element of interpretation

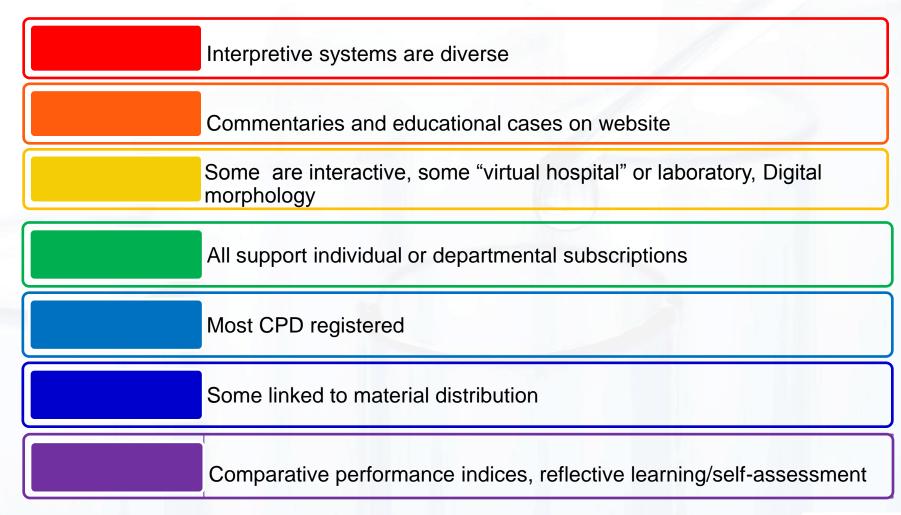
Generally based on a response from an individual or group of individuals

Many types of interpretative schemes are available





Lots of Different Resources







UK NEQAS Immunology iEQA







Interpretative External Quality Assessment iEQA - What is it?

- Multi-disciplinary, self-directed, reflective learning resource
 - Focused upon QA & current lab practice
- Convenient & cost-effective
 - Web-based, login anywhere, anytime
- Aimed at ALL staff grades
- Bite-sized
 - Save cases for completion later
 - Cases always open (>1 attempt per case)





Why iEQA?

- Provides a dynamic and rich information source to improve knowledge
- Helps staff to acquire new skills quickly, and enable them to keep up to date with new research and best practice in Pathology
- There are currently over 80 cases to choose from and 2 new ones are being developed every month





How does iEQA work?

Log on to web based site (www.immqas.org.uk)

Pick case study (new or old)

Navigate through the information available

Report comments/findings

Complete and exit case study

 Analyse your performance against the 'expert path' and review your thought processes against peer group



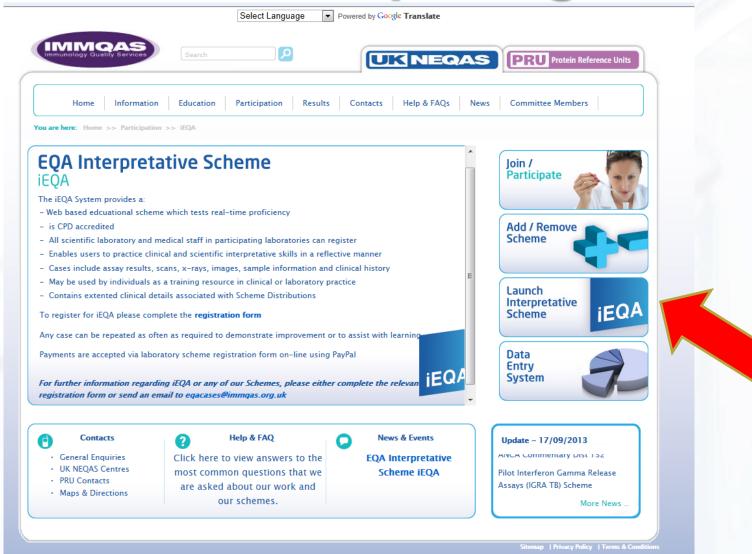


How to use iEQA





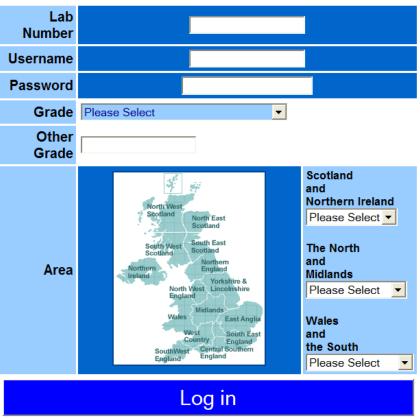
www.immqas.org.uk















After Registration



IMMQAS External Quality Assessment



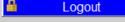
Menu

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Home







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KPMD IT Solutions Ltd

Welcome Hazel Wilkinson to Online EQA

Instructions for Use

You have successfully logged into the participant area of the IMMQAS online educational tool. Before you start on your case we would like you to read the following information which should help you navigate through the case.

How to use Assessment Area (Flash Demo*)

Text Instruction on use of the system

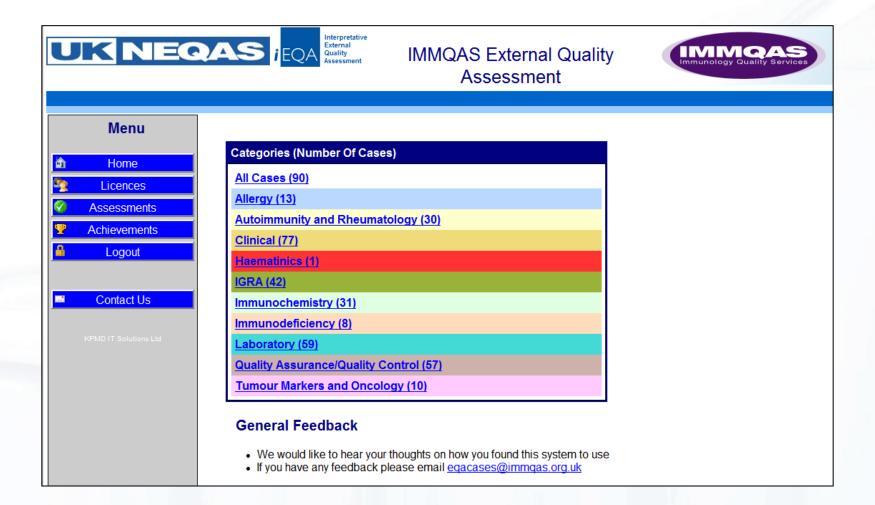
Flash Demo* - Depending on your connection speed loading process will take from 2 to 5 minutes. Demo will be opened in new window to allow you to use the system simultaneously.

Please remember to turn off your browsers Pop-up blocker





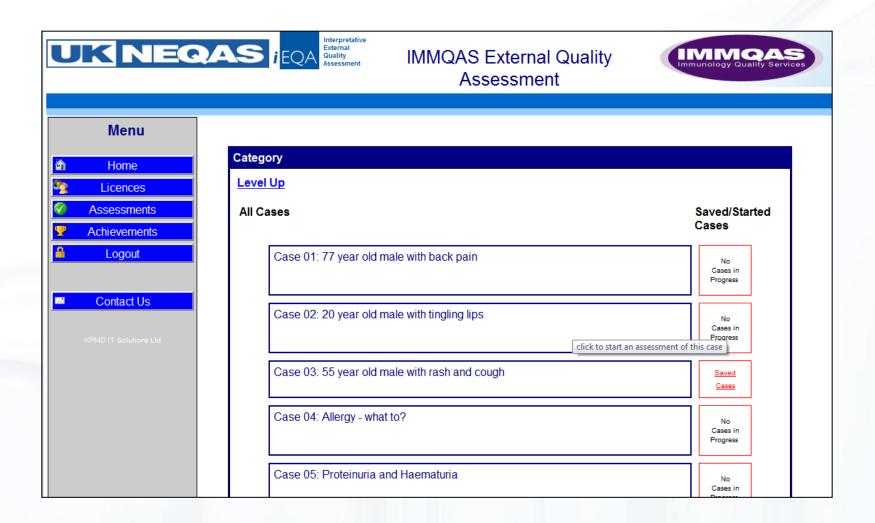
Assessments - General







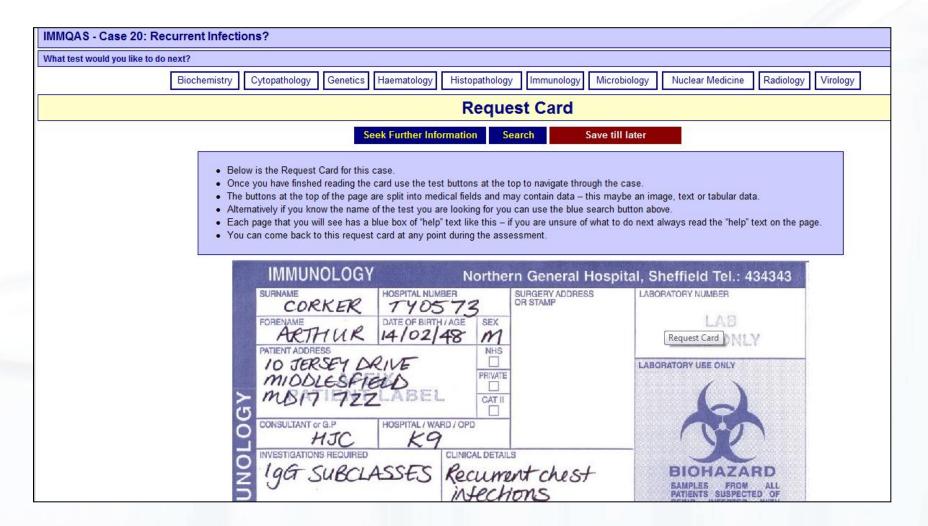
Choose a Case!







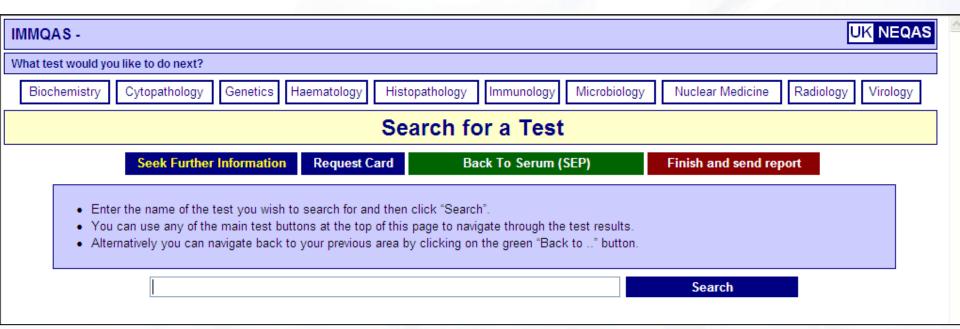
Navigate from request card







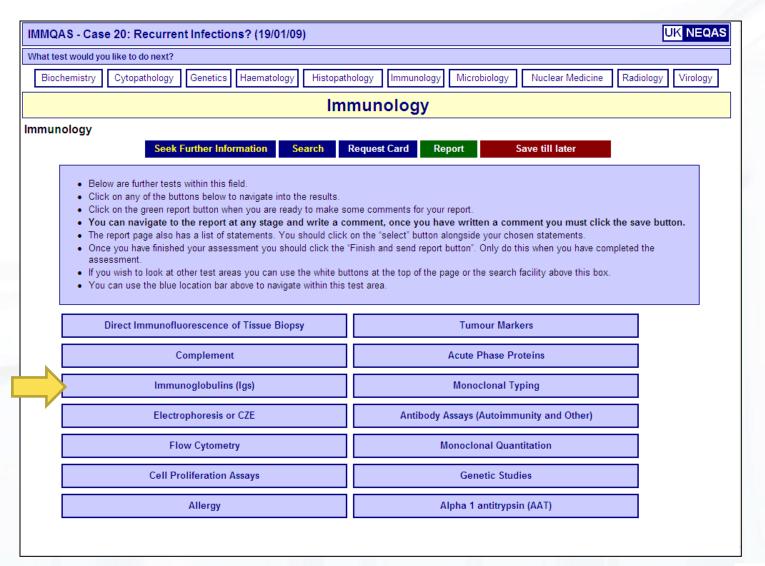
Can't find what you're looking for?







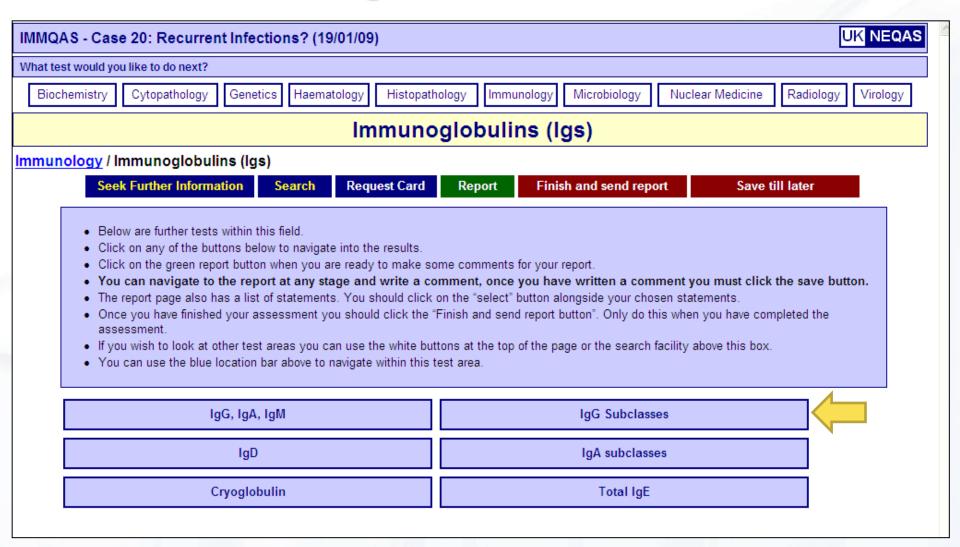
Immunology selected







Immunoglobulins selected







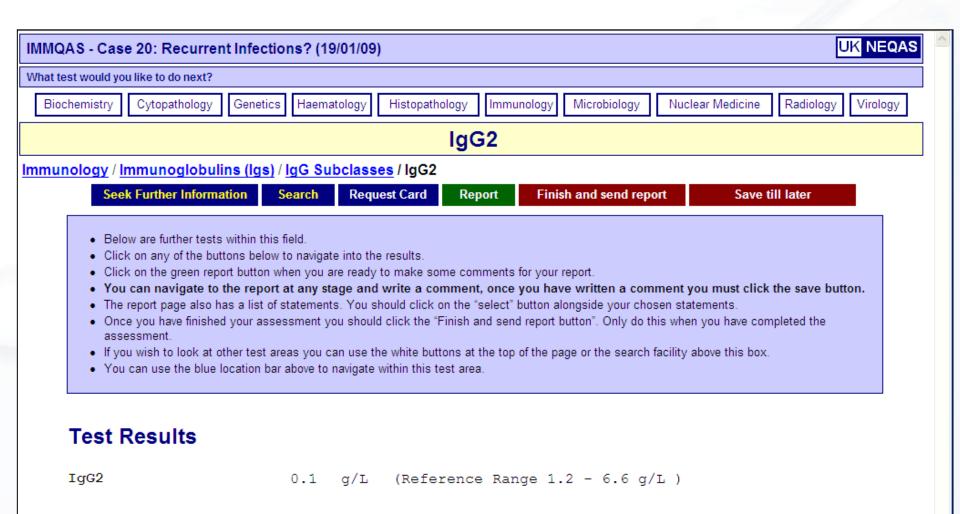
IgG subclasses selected

IMMQAS - Case 20: Recurrent Infections? (19/01/09)	NEQAS
What test would you like to do next?	
Biochemistry Cytopathology Genetics Haematology Histopathology Immunology Microbiology Nuclear Medicine Radiology V	/irology
IgG Subclasses	
mmunology / Immunoglobulins (Igs) / IgG Subclasses	
Seek Further Information Search Request Card Report Finish and send report Save till later	
 Below are further tests within this field. Click on any of the buttons below to navigate into the results. Click on the green report button when you are ready to make some comments for your report. You can navigate to the report at any stage and write a comment, once you have written a comment you must click the save button The report page also has a list of statements. You should click on the "select" button alongside your chosen statements. Once you have finished your assessment you should click the "Finish and send report button". Only do this when you have completed the assessment. If you wish to look at other test areas you can use the white buttons at the top of the page or the search facility above this box. You can use the blue location bar above to navigate within this test area. 	
lgG1	
IgG3	





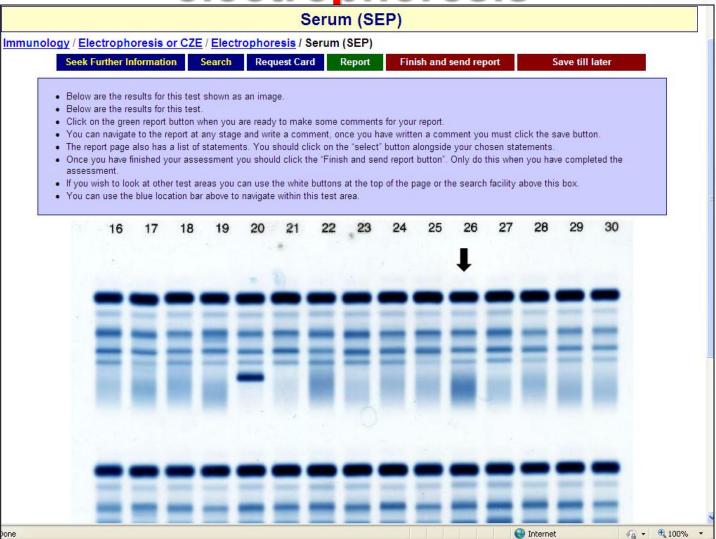
IgG subclasses selected







Images available-Serum electrophoresis







Write a report - Instructions

Report Page

Seek Further Information

Search

Request Card

Back To Serum (SEP)

Finish and send report

- Below are the results for this test shown as an image.
- . Below are the results for this test.
- Click on the green report button when you are ready to make some comments for your report.
- . You can navigate to the report at any stage and write a comment, once you have written a comment you must click the save button.
- . The report page also has a list of statements. You should click on the "select" button alongside your chosen statements.
- Once you have finished your assessment you should click the "Finish and send report button". Only do this when you have completed the
 assessment.
- . If you wish to look at other test areas you can use the white buttons at the top of the page or the search facility above this box.
- · You can use the blue location bar above to navigate within this test area.

Once you have clicked on report, remember to click save

Current Path

Serum (SEP)

Fixed Text Comments

Immunochemistry

AAT: Carrier of the S deficiency allele.	<u>SELECT</u>
AAT: Carrier of the S deficiency allele.	<u>SELECT</u>
AAT: Carrier of the Z deficiency allele.	<u>SELECT</u>
AAT: Heterozygous for a rare deficiency allele. Suggest family studies. Please send more information	SELECT.





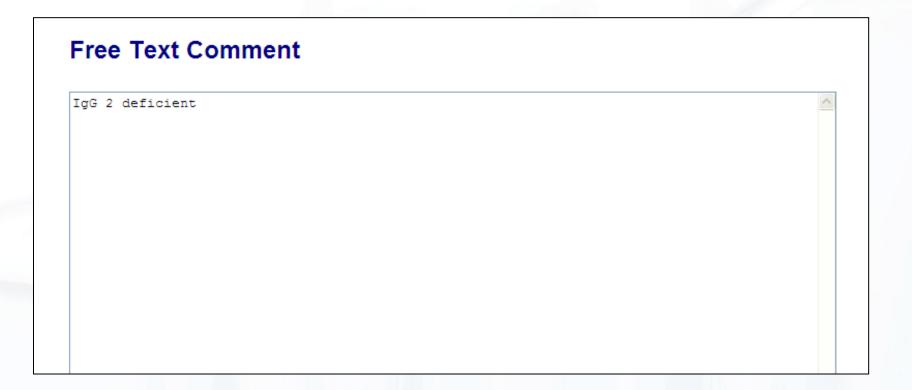
Write a report - fixed text

SEP: Kappa monoclonal free light chains detected	<u>SELECT</u>
SEP: lambda monoclonal free light chains detected	SELECT
SEP: Low albumin level	SELECT
SEP: Nephrotic pattern seen	SELECT
SEP: No significant abnormality detected	UNSELECT
SEP: Oligoclonal increase in immunoglobulins	<u>SELECT</u>
SEP: Oligoclonal restriction in gamma spectrum	<u>SELECT</u>
SEP: Reduced alpha 1 band, suggest check for AAT deficiency	SELECT
SEP: Sample shows some in vivo degradation. Please repeat.	<u>SELECT</u>
SEP: Small monoclonal present without evidence of immunoparesis:	<u>SELECT</u>





Write a report - free text







Finish Assessment

Finish

Finish Assessment of

Exit

- . By Clicking the finish button you have begun the process of terminating your assessement.
- Below you can see the Comments you have selected and the Free Comments you have entered.
- . Should you wish to carry on with your assessment click on the green "Back to" button.
- Alternatively you may wish to search for another test by clicking on the blue "Search" button.
- . Should you wish to end your assessment click on the red "Exit" button.
- After you have clicked "Exit", this report will be submitted and it will end your current session on this assessment.

Selected Comments

Immunochemistry

. SEP: No significant abnormality detected

Tumour Markers

Autoimmunity

General Comments

Free Text Comment

Comment 1

Time (GMT): 09:00:41

IgG 2 deficient





Finish Assessment – Structured Answer

Answer



Suggested Report

Complete IgA deficiency with low IgG2 antibodies. Note that there is no response to recent pneumococcal vaccination or Influenza vaccination. Bronchiectasis is present bilaterally. Suggest referral to exclude immunodeficiency. Negative endomysial antibody is not reliable in presence of IgA deficiency. Dr X, 1234567.



Learning Points

- 1. Consider the possibility of immunodeficiency when bronchiectasis is present
- 2. Know the presenting features/warning signs of immunodeficiency (see web-based diagnostic aid link in references) particularly bacterial infections of the upper and lower airways and gastroenteritis/diarrhoea.
- 3. Know that many immunodeficiencies present in childhood but CVID and others can start at any age.
- 4. Know the clinical significance of complete IgA deficiency
 - 1. Not uncommon at 1 in 4-500
 - 2. Often asymptomatic but increased risk of reactions to IgA containing blood products
 - 3. Associated with small increases in risk for other disorders like Coeliac disease and organ-specific autoimmunity
 - 4. Many appear entirely healthy
 - 5. Many have lesser degree of susceptibility to recurrent viral infections but are otherwise relatively healthy
 - 6. May be a marker of a more severe immune deficiency which behaves like CVID
 - Total IgA deficiency is <0.07g/L and causes false-negative IgA assays (e.g. for IgA TTG or IgA EMA in Coeliac disease screening)
 - 8. Lesser degress of isolated low IgA are often of little clinical significance.
 - 9. Subclass deficiencies plus IgA deficiency may be more severe.
- 5. Know how to investigate/refer for further investigation.
- 6. Know the place of IgG subclass assays in investigation as a second line, not first line, test.
- 7. Be aware of appropriate internal consistency and quality assurance checks that can be applied to improve laboratory quality put in place limits in SOP for believable results, delta checks etc and train your staff to recognise unusual or unbelievable results which require checking before release.
- 8. Know that there are other non-antibody immune deficiencies that can lead to bronchiectasis including ciliary function defects.







Discussion

This is a gentleman in late middle age who has presented with a recent diagnosis of bronchiectasis but who was well as a child, had all the normal childhood vaccinations but gradually became ill in his 40s with recurrent chest infections - many of which required admission to hospital and he was eventually diagnosed with bilateral bronchiectasis and had a lobectomy (see HRCT). Although IgG subclasses were requested the appropriate investigation would be total immunoglobulins in the first instance. You are asking if there is any possibility of antibody deficiency.

Total immunoglobulins revealed IgA deficiency. His IgG subclasses suggested a low IgG2. There is no evidence of a monoclonal paraprotein on the SEP and UEP, and an abdominal ultrasound was normal.

While someone presenting in their 60s with bronchiectasis is not uncommon, this gentleman also has problems with recurrent diarrhoea and this increases the chance of antibody deficiency. The IgA endomysial or tTG assay is likely to be unreliable in the presence of IgA deficiency but a biopsy may be needed. Seronegative coeliac or coeliac disease should be excluded. He has normal ferritin despite an anaemia, and probably has an anaemia of chronic disease.

This patient has no obvious clues in the past medical history to suggest an underlying pre-disposition to chronic chest disease, he had never smoked, his alpha 1 anti-trypsin is normal.

He received the usual recommended vaccinations for individuals with chronic respiratory disease (influenza and pneumococcal) recently and if this was noted in the history, it would have been possible to check antibody responses and discover that these revealed a failure to respond to influenza and pneumococcal vaccinations. While not wholly diagnostic in itself, this is highly suspicious and could suggest a referral for further immunological investigation was needed. He also has a low MBL, is this relevant?

He was finally diagnosed as an IgA deficient patient with Specific Antibody Deficiency (SPAD - a failure to respond appropriately to bacterial polysaccharide capsular antigens which leads to a clinical picture similar to hypogammaglobulinaemia in some cases and responds to immunoglobulin replacement or prophylactic antibiotics). He responded well to immunoglobulin replacement. His jejunal biopsy did not suggest coeliac disease and he did not require a gluten free-diet.





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QC issues

- Summation of the immunoglobulin subclasses reveals a >2 g per litre difference with the total immunoglobulin and should
 have alerted individuals in the laboratory to a possible quality control issue and those assays would both need to be
 repeated. In general there should not be greater than a 0.5 g/L difference between the summation and the total lgG, not
 withstanding the different calibration issues that have arisen in the past.
- Furthermore his HiB antibody level is unbelievably high (unless recent infection or vaccination) and this should be repeated too. The usual laboratory processes of checking for internal quality control, sample transposition and identity checks should be conducted if the repeat results are different.

Further Reading

- Clinical Immunology Review Series: An approach to the management of pulmonary disease in primary antibody deficiency.
 Tarzi, M.D. et al, Clinical and Experimental Immunology 2008, 155: 147-155.
- Web-based article on IgA and IgG subclass deficiencies http://emedicine.medscape.com/article/885348-overview
- UK Primary Immunodeficiency Network (UKPIN) Web-based diagnostic tool for immunodeficiencies. Patient-centred screening for primary immunodeficiency: a multi-stage diagnostic protocol designed for non-immunologists http://www.ukpin.org.uk/ESID/index.htm





How have I done? Personal Achievements Area





Personal Achievements



Achievements

Welcome to the Personal Achievements area, from here you can view the analysis of the assessments that you performed.

Assessments

Please click on the name of the assessment below that you wish to view.

- Case 01: 77 year old male with back pain
- · Case 02: 20 year old male with tingling lips
- Case 03: 55 year old male with rash and cough
- · Case 04: Allergy what to?
- · Case 05: Proteinuria and Haematuria
- Case 06: An unusual electrophoresis
- Case 07: Informed Choice?
- Case 08: Tired all the time?
- Case 09: 35 year old female with a rash on wearing gloves
- Case 10: Subarachnoid haemorrhage?
- · Case 11: Likely SAH?
- Case 12: Recurrent Bronchitis?
- Case 13: Abdominal pain in a 16 year old
- Case 14: Death during Coronary Angiography
- Case 15: Multiple positive tests but what is the diagnosis?
- Case 16: Abnormal immunoglobulins?
- Case 17: Familial Liver Disease
- Case 18: Positive ANA what does it mean?
- Case 19: Abdominal pain and jaundice
- Case 20: Recurrent Infections?
- Case 21: Muscle Weakness
- Case 22: Autoimmune Screen please
- Case 23: Dysuria in a man
- Case 24: Raised Haemoglobin
- Case 25 (0911): Asylum Seeker with a cough



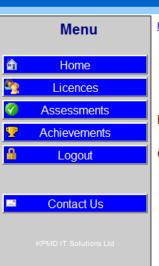


System logs each session



IMMQAS External Quality Assessment





home | Case 38: Serial Immunoglobulins - biological variation?

Achievements

Case 38: Serial Immunoglobulins - biological variation?

Below are the sessions which have been performed on this assessment, click on to view more details

CPD certificates and certificates of participation are available for completed cases where at least 10 minutes has been spent considering the case

Date	Time	Time Spent on Case		
8 Jun 2011	10:45	0 h: 11 m: 31 s	View the session	Print/Save Certificate(s)



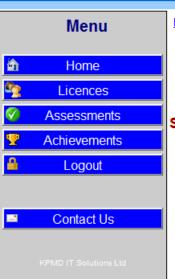


'View the session'



IMMQAS External Quality Assessment





home | Case 38: Serial Immunoglobulins - biological variation? | session (08/06/2011 10:45:29)

Achievements

Case 38: Serial Immunoglobulins - biological variation?

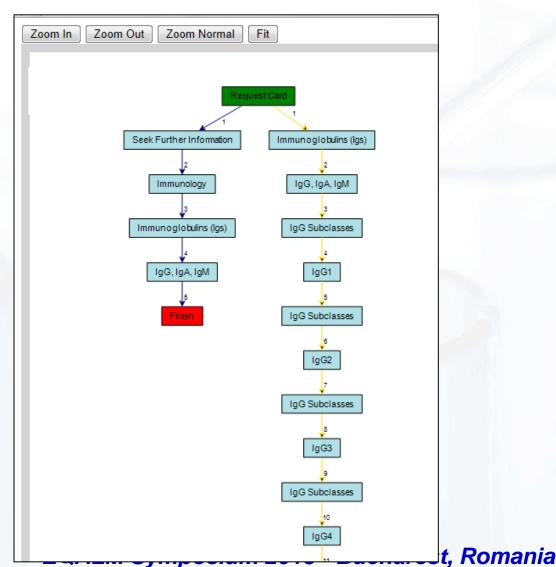
Session (08/06/2011 10:45:29)

- · Test travelled to in this session
- Your report
- Same grade comparison
- All iEQA participants comparison
- Expert pathway comparison





View a comparison of your session against the 'expert path'







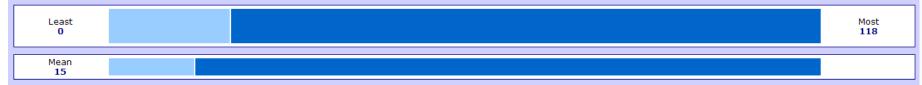
Comparison of your assessment against your peers

Tests Visited

- You have visited 4 out of 28 of the Important tests
- You have visited 0 out of 12 of the Red Herring tests

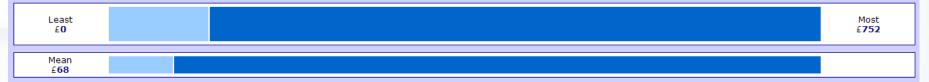
Hops

You made 19 hops



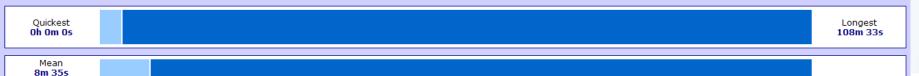
Cost

The cost of your assessment was £ 103



Time

You took 2 minutes and 30 seconds







Continuing Professional Development - CPD





iEQA Certificate



UK NEQAS for Immunology Allergy and Immunochemistry

Department of Immunology PO Box 894, Sheffield, S5 7YT

www.immqas.org.uk

Certificate of Participation

This document confirms that

Hazel Wilkinson

IMMQAS Immunology Northern General Sheffield South Yorks

S5 7AU

has participated in the UK NEQAS Immunology Interpretative scheme on

08 June 2011

and has spent 0 hours and 11 minutes considering the following case





iEQA summary

Log on to web based site (www.immqas.org.uk)

Pick case study (new or old)

Navigate through the information available

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 Analyse your performance against the 'expert path' and review your thought processes against peer group



6



Lab Manager Functionality





Licences



IMMQAS External Quality Assessment



Lab Manager Menu

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Licences For Lab: 000 - Administrator

•

Subscription Year: 2012/2013

Buy More Licences Invoices New Participant Lab Details Transfer In

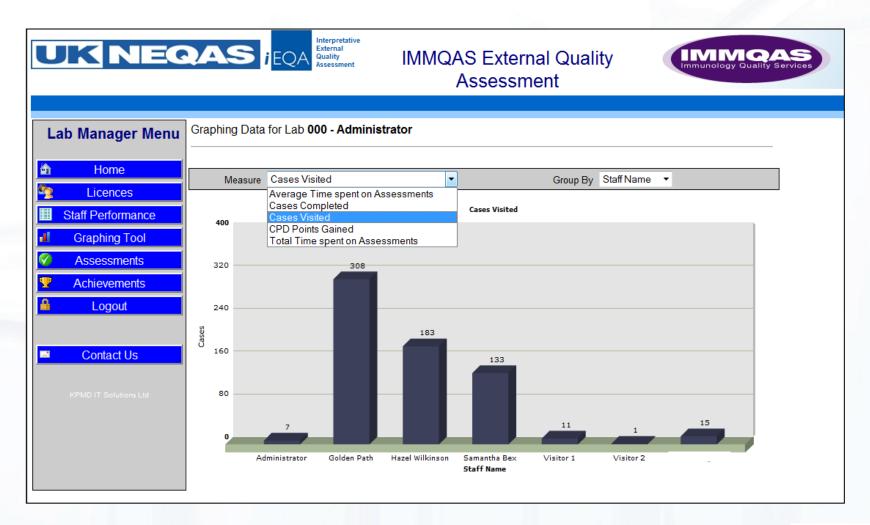
Licences Purchased: 25 Remaining Licences: 14 Licences Applications Pending: 0

No	Name	EMail	Grade	Tel No	Status
1	Administrator		Cons	0114 2715715	Active
2	Golden Path		Cons		Active
3	Administrator 2		BMS1	0114 2715715	Active
4	Administrator 3		BMS1		Active
5	Administrator 4		BMS1		Active
6	Hazel Wilkinson	hazel@immqas.org.uk	BMST	0114 2269755	Active
7	Samantha Bex	sam@immqas.org.uk	BMS2	0114 2269107	Active
8	Visitor 1	hazel@immqas.org.uk	BMS1	0114 2269755	Active
9	Visitor 2	hazel@immqas.org.uk	BMS1	0114 2269755	Active
10	William Egner	bill@immqas.org.uk	Cons	0114 2715715	Active
11	Admin 5	hazel@immqas.org.uk	BMS1	0114 2715715	Active





Staff Performance - Graphing Tool







Type of Registration

Annual Registration

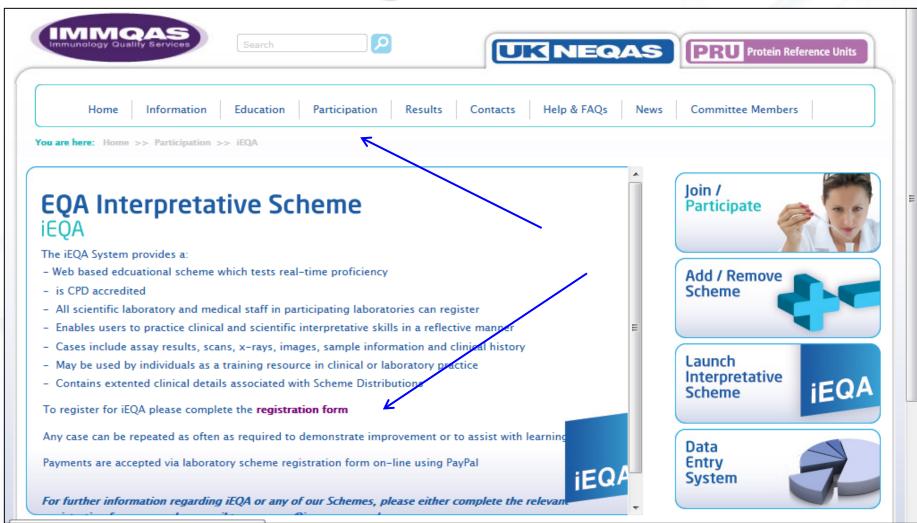
- Licenses issued
 - One, five, ten users per lab
- Payment by invoice or

On line via PayPal





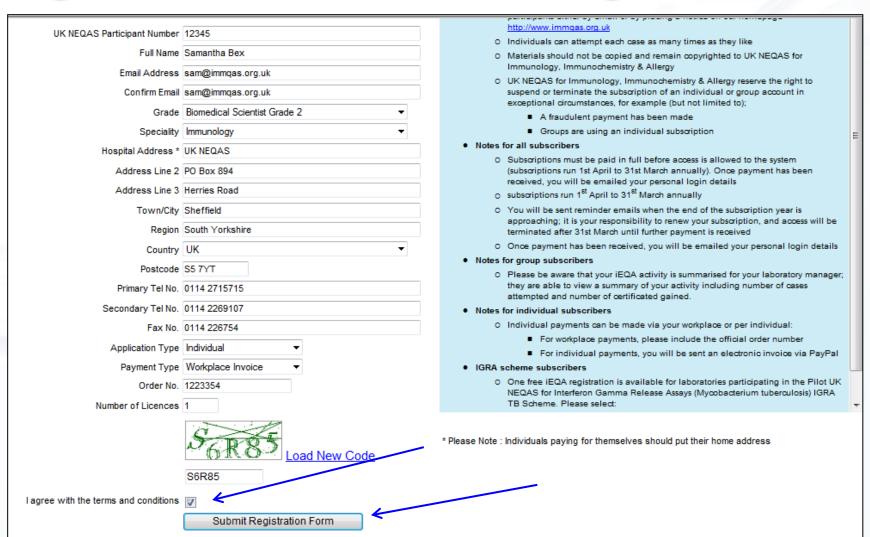
Registration







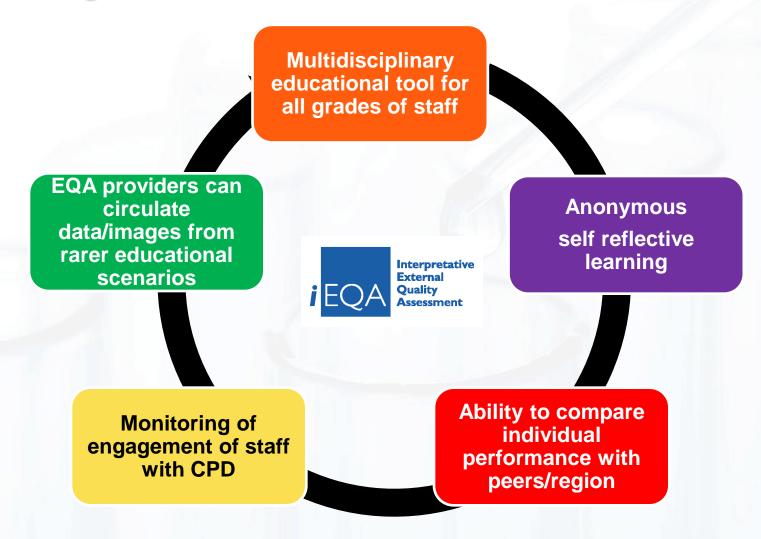
Agree and Submit Registration







Why should I be interested?







What now?

Current status: Approximately 250 individuals are using the system

Over 80 multidisciplinary cases available

New cases added monthly





Thank you for listening

Any Comments/Questions?

www.immqas.org.uk

ukneqas@immqas.org.uk

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