South East England General Histopathology EQA Scheme

How the scheme is scored

UKAS PROFICIENCY TESTING

7808

Celebrating 20 Years of General EQA in South East England 1999-2019
South East England General Histopathology EQA Scheme

- Who decides what the correct answer is?
  - The participants do
- How does my text answer become a numerical score?
  - Let me explain….

Case Submission

- As a participant, **you** select the cases suitable for the EQA scheme
- On the submission form **you** tell us what the diagnosis is
- **You** sign to say that the diagnostic features are present in all 12 slides
- **You** tell us your laboratory accreditation status

Case Selection

- The organiser looks at the slides to ensure each case is suitable - see right.
- The range of diagnoses and cases that we send out is as good as **you** have submitted

The organiser

- Picks one case at random from the selection available for that organ system (the submitted diagnosis is hidden)
- Uses professional judgement to select cases with a range of different diagnoses between the cases and between circulations
- Selects cases from as many submitting centres as possible in each circulation to avoid using the same contributing hospital repetitively
- Selects a different duplicate organ system in each round

Responses

Participant 1	Submitted responses	Certainty score
Case 1	Diagnosis A	9
	Diagnosis B	1
Case 2	Diagnosis C	8
	Diagnosis D	2
Case 3	exempt	
Case 4	Diagnosis E	10

- **You** indicate your confidence in a diagnosis by sharing 10 points between as many diagnoses as desired. 10 points allocated to a single diagnosis indicates 100% certainty of the diagnosis .
- All cases must be answered unless you have previously declared exemption from an organ system. A score of zero will be allocated to non-exempted unanswered cases.
- Any uncertainty should be regarded as a less-than-ideal response, unless other participants are similarly uncertain

The purpose of the scheme is to assess personal ability to make an interpretation, therefore discussion with a colleague prior to result submission is not permitted, even in circumstances where consultation with a colleague would be good practice in a routine workload.

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Analysing the responses

Maidstone and Tunbridge Wells NHS
NHS Trust

Case 1	Submitted responses	Certainty score
Participant 1	Diagnosis A	9
	Diagnosis B	1
Participant 2	Diagnosis C	8
	Diagnosis D	2
Participant 3	exempt	
Participant 4	Diagnosis C	7
	Diagnosis B	3
Total score for case 1		30

- When all responses have been received, each diagnosis offered for a case is listed.
- The certainty score allocated to each diagnosis is totalled
- Over 100 people take part in each round, so the influence of a single individual is minimal
- **It is important that there is no conferring when determining your diagnosis**

Determining the indicative diagnosis for a case

Score pre consultation	Score for case 1 (all participants)	Popularity score
Diagnosis A	9	9/30 = 0.3
Diagnosis B	1+3 =4	4/30 = 0.133
Diagnosis C	8+7 + 15	15/30 = 0.5
Diagnosis D	2	2/30 = 0.06
Total	30	1.0

- A popularity score is calculated by dividing the total score for a diagnosis by the total score for all diagnoses for a single case.

- A case has to achieve a popularity score of at least 0.75 to be a scoring case, i.e. there has to be at least 75% confidence on a preferred diagnosis.
- The organiser has no influence on the scores allocated – these are calculated
- This case is currently non-scoring, as no diagnosis has a popularity score >= 0.75

Confirming the diagnosis of a case: Consultation

For each case, a list of all submitted diagnoses is sent to **you** to consider which diagnoses are synonyms or similar and should be merged.

- **You should feel there is only one "correct" diagnosis as a result of your merging suggestions.**
- Diagnoses that remain unmerged should be considered clinically different from other diagnoses on the list.
- Multiple merging combinations may be valid e.g. merging two malignant cases and also merging two non-malignant cases.
- At least 50% of participants who have answered the case have to take part in the consultation in order for any merging suggestions to be valid.

Merging Diagnoses after Consulation

Score post consultation	Score for case 1	Popularity score
Diagnosis A	9+ 8+7 = 24	24/30 = 0.8
Diagnosis B	1+3 =4	4/30 = 0.133
Diagnosis D	2	2/30 = 0.067
Total	30	1.0

- In this example, 70% of those who took part in the consultation said that diagnosis A and C should be considered the same diagnosis and were merged

Recalculating the popularity score, this is now a scoring case as Diagnosis A achieved a popularity score of 0.8

i.e. **the participants** have 80% confidence in this diagnosis

Allocating a score for each diagnosis in a case

The popularity score for each diagnosis in a case is converted to a score for the diagnosis, by dividing the popularity scores of each diagnosis by the highest popularity score for that case.

Case 1: Highest popularity score 0.8

Score post consultation	Score for case 1	Popularity score	Allocated Score for diagnosis
Diagnosis A	9+ 8+7 = 24	24/30 = 0.8	=0.8/0.8 = 1
Diagnosis B	1+3 =4	4/30 = 0.133	=0.133/0.8 = 0.16
Diagnosis D	2	2/30 = 0.067	=0.067/0.8 = 0.08
Total	30	1.0	

I'm an expert in this organ system - Everyone else has got it wrong

The ethos of this EQA scheme is consensus agreement: is your diagnosis in line with your peers?

The potential impact of the error on the patient is not relevant.

- In a difficult cellular pathology case, failing to identify a single malignant cell might have a profound impact on the patient, but it may be an error that is entirely understandable (and is made by many of the scheme's participants). Conversely, misdiagnosis of a benign entity as another benign entity may have no effect on the patient whatsoever, yet (depending on the diagnoses in question) such an error might immediately call into question a pathologist's competence.

Personal scores

- Personal scores per case are then calculated, based on the certainty score of the case and the percentage certainty originally allocated by the participant.
- Personal scores for each case are totalled to give an overall score for each participant, and converted to a percentage score, taking account of exempt organ systems
- The scores are ranked, All those with 100% score are ranked 1
- Those ranked in the bottom 3% are flagged as poor performers

Non-scoring cases

Cases are eliminated from scoring for the following reasons

- If the diagnosis with the greatest agreement from the participants is different to the diagnosis submitted by the case contributor. In these cases the case contributor is contacted to review patient management
- If the popularity score is less than 0.75 i.e. there is less than 75% confidence from participants in the assigned diagnosis.

Who decides what the correct answer is?

- **You** submit the cases suitable for EQA
- **You** tell us which diagnosis is most likely to be correct via confidence scoring
- **You** tell us which diagnoses are synonyms or clinically no different from each other via the consultation process

- **We** ensure the slides match the diagnosis & are for the correct organ system
- **We** circulate the slides
- **We** do the calculations
- **We** issue the calculated results