

SAM and ARS Question Writing Guidelines

DEVELOPING SELF-ASSESSMENT
MODULES TEST QUESTIONS
AND AUDIENCE RESPONSE QUESTIONS



GUIDELINES FOR DEVELOPING SELF-ASSESSMENT MODULES TEST QUESTIONS

USCAP is accredited by the American Board of Pathology (ABPath) to offer Self-Assessment Modules (SAMs) credits for the purpose of meeting the ABPath requirements for Continuing Certification (CC). All activities that offer SAMs also offer *AMA PRA Category 1 Credit™*. These activities may also be used to meet Continuing Medical Education (CME) requirements for licensure and educational requirements.

In order to offer SAMs credits, USCAP requires faculty to develop a post-test of self-assessment questions or incorporate Audience Response Questions into the didactic presentations. Information below will help to explain the differences in the two methods and provide guidance on how to prepare your educational materials.

Question Writing Tips

1. An ideal question is one that can be answered without looking at the choices. Higher order questions that require interpretation, judgment, or problem-solving are better than simple recall of information.
2. Questions should be stated as a positive (do not use no, not, etc). Do not use "all of the following except." Negatively-phrased questions can increase confusion rather than reinforce educational messages.
3. Answer choices should be approximately the same length and type (there is a tendency to give more information about the correct response and therefore make it longer).
4. Do not use absolutes such as "all", "none", "always" and "never". "All of the above" or "none of the above" are not acceptable choices.

Self-Assessment Modules (SAMs) Post-Test

Using a SAM post-test can help learners to review the information delivered during a presentation. Attendees must achieve a pass rate of 80% to be awarded SAMs credits. The ABP requires that persons taking the test be given immediate feedback, so please provide a brief explanation for the correct answer, reference(s), and a learning objective. For each hour of instructional time (including Q&A), faculty must write four (4) questions (a thirty-minute presentation would require two (2) questions). The test will be administered online through the USCAP website.

Question Requirements

1. Test questions should address comprehension of concepts covered during the educational activity. The test question should be an important concept that is medically (clinically) relevant. In addition, it should correlate to a particular learning objective.
2. All questions must be multiple choice with three responses (correct answer plus two distractors).
3. True/false questions are not acceptable.
4. For the "correct answer" please provide a few sentences explaining why the answer is correct.
5. Please link a relevant learning objective to each question. Objectives may be used more than once.
6. Each question must include at least one reference.
7. Since this will be an online test, you may wish to include one or two still images (not virtual slides) for the question.
8. Four questions per hour of instructional time (including Q & A) are required.

On the following pages are examples of SAMs questions.

USCAP West
500 South Palm Canyon Drive
Suite 321
Palm Springs, CA 92264
Phone | 760.327.6777
Fax | 760.327.6477

USCAP East
936 Broad Street
Suite 106
Augusta, GA 30901
Phone | 706.733.7550
Fax | 706.733.8033

www.USCAP.org



1) Which of the following is a risk factor for Barrett's esophagus-related adenocarcinoma?

- ✓ A. Presence of dysplasia
- B. Previous history of alcohol use
- C. Age less than 30

Explanation:

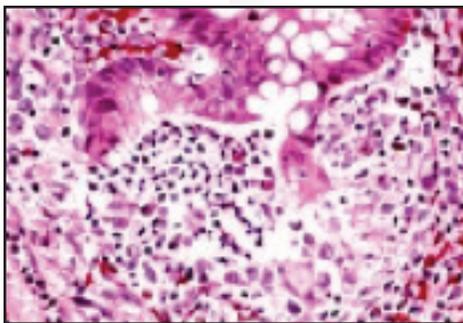
Q1. There are a number of risk factors which increase the risk of adenocarcinoma in patients with Barrett's esophagus. Increased patient age, increased length of Barrett's esophagus, body mass index and the presence of either low- or high-grade dysplasia are all well established risk factors. However, a previous history of alcohol abuse has not been shown to significantly increase this risk.

Learning Objective:

Recognize the pathogenesis and epidemiology of Barrett's esophagus.

Reference:

- Wilde CT, Hardle LJ. Reflux, Barrett's oesophagus and adenocarcinoma: burning questions. *Cancer* 2003;3:676.



Click slide image to enlarge

- 2) Which of the following is the most likely explanation for the changes seen in the image taken from the transverse colon in a 25-year-old male with diarrhea?
- A. Granuloma secondary to Crohn's disease
 - B. Sarcoidosis
 - ✓ C. Crypt rupture granuloma

Explanation:

Q11. This image shows evidence of neutrophil-mediated crypt injury with extravasation of mucin into the lamina propria causing a foreign body histiocytic response, also known as a crypt rupture granuloma. Although granulomas can be seen in a number of settings, including Crohn's disease, sarcoidosis and a variety of infectious colitides (including Histoplasmosis), this image clearly shows the granuloma arising secondary to crypt rupture.

Learning Objective:

Explain the diagnostic pitfalls in diagnosing IBD and IBD-related dysplasia.

Reference:

- Pierik N, De Hertogh G, Vermeire S, et al. Epithelioid granulomas, pattern recognition receptors and phenotypes of Crohn's disease. *Gut* 2005;54:233.

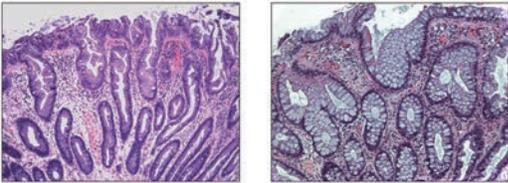
Audience Response System (ARS) Questions

Using an audience response system is an excellent way to engage learners, while also delivering relevant information. The technology can be easily integrated into PowerPoint presentations and gives faculty a way to interact with learners during a lecture. Below are some tips for developing your ARS multiple-choice questions.

1. ARS questions should address comprehension of concepts covered during the educational activity. The questions should be an important concept that is medically (clinically) relevant. Frequently ARS questions guide learners through the differential diagnosis of a difficult case or mimic clinical sign-out with the review of H&E and IHC stains and then ask for the diagnosis.
2. All ARS questions must be multiple choice with three responses.
3. Not all questions need to have a correct answer. Open-ended questions may be used to generate discussions about differential diagnosis or complicated cases.
4. After the ARS question, it is good to add an explanation slide discussing the correct and incorrect answer rationale (if applicable)
5. The explanation for each question must include one reference.

Examples of ARS Questions are below.

1. Which one of these is a hyperplastic polyp?



- A. Polyp on the left
- B. Polyp on the right
- C. Both of them

Explanation:

Following the presentation of an ARS question, it is recommended that the correct answer be discussed with reasons for why it is correct. Below is an example of information that may be included on an explanatory slide.

<p>Microvesicular</p>	<p>Goblet cell rich</p>	<ul style="list-style-type: none"> - All normal proliferation (symmetric Ki-67 labeling) - Small - More common in distal colon <p><small>Torlakovic, et al. Am J Surg Pathol 2003; 27(1): 65-81.</small></p>	<p>Microvesicular</p>	
<p>Mucin-poor</p>	<p>Mucin-poor</p>		<ul style="list-style-type: none"> • Mucin-poor polyps likely injured microvesicular polyps • Common molecular changes <ul style="list-style-type: none"> • <i>BRAF</i> mutations • Some DNA methylation (CpG island methylator phenotype/CIMP) 	

2. Which of the following criteria do you rely upon most when classifying non-dysplastic serrated polyps?

- A. A single dilated or branched crypt
- B. Mitotic figures in upper crypt
- C. Low power architecture

Explanation:

Following the presentation of an ARS question, it is recommended that the correct answer be discussed with reasons for why it is correct. Below is an example of information that may be included on an explanatory slide.

**Non-Dysplastic Serrated Polyp
Diagnostic Reproducibility**

- Most big polyps of right colon are readily diagnosed as sessile serrated polyps
- Most polyps of rectum are readily diagnosed as hyperplastic polyps
- The diagnosis is not always straightforward
 - Small polyps of abdominal colon
 - Large polyps of left colon and rectum
 - Polyps with a few dilated crypts

**Sessile Serrated Polyp/Adenoma
Original Diagnostic Criteria**

- Constellation of at least 4 of 7 features
 - Exaggerated serration in lower crypt, surface villosity or papillarity
 - Crypt branching/horizontal crypts
 - Crypt dilation
 - Increased epithelial to stromal ratio (>50%)
 - Mitotic figures in upper crypt
 - Cytologic atypia in upper crypt
 - Increased mucin production

Rex, et al. Am J Gastroenterol 2012 Sep; 107(9): 1315-29.

Questions

If you have additional questions or need assistance, please email the USCAP Education Department at education@uscap.org.