



Writing Items for the ABR

Content Editing Division

Item Writer Resources

- Item Format Reference Sheet – quick overview of ABR item format
- Accepted Acronyms and Abbreviations
- Item Writers' Guide – in-depth reference with detailed instructions and additional examples

These resources and a copy of this presentation are available from your exam developer. Also, feel free to contact Editing if you have any questions.

Item Objectives

Focused

- Each item should focus on one concept.

Clear

- Each item should be straightforward, easy to interpret, and unambiguous.

Concise

- Each item should include only information necessary to answer the question.

Item Components

- Stem = Background + situational information + images/diagrams/tables + question
- Options = **KEY** (correct answer) + 3 **DISTRACTORS** (incorrect answers)

4 total options per item is preferred
3 options are acceptable for items with only 3 plausible choices

Acronyms

- Clarity in content; no chance of misinterpretation
- The ABR has a list of acronyms that are acceptable to use without expansion.
- If an acronym is not on the list, spell it out on first use.
- Example: Instead of **ML**, use **mediolateral (ML)**.

Use of Sex and Gender Terminology

- Aim for gender-inclusive terminology and phrasing
- Is gender relevant or required to answer the question?
- Use “they/them” for the gender-neutral singular
- Examples:
 - A radiologist completes 20 continuous medical education credits every year, and **they** keep record of **their** progress. This is an example of what professional commitment?
 - For this **pregnant patient**, what retroperitoneal finding is shown?

Stem Attributes

- Linear delivery of information
- Complete, clear question
- Focus on a single concept
- Positively worded format
- Objectively worded structure

Linear Delivery of Information

Background + situational information + request for answer

A 7-year-old patient is treated for . . .

+ One year later, they present with . . .

+ What is the most appropriate next imaging exam?

Cases should be written in present tense, when possible.

Linear Delivery of Information

Background + situational information + request for answer

INCORRECT:

What is the most likely diagnosis for a patient with rapid weight gain who presents with abdominal distention 6 weeks after receiving abdominal irradiation for hepatobiliary cancer?

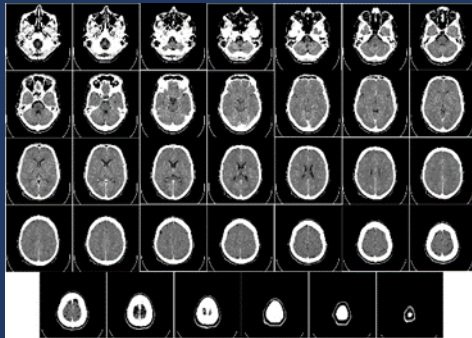
CORRECT:

A patient with hepatobiliary cancer is treated with abdominal irradiation. Six weeks later, they present with abdominal distention and rapid weight gain. What is the most likely diagnosis?

Linear Delivery of Information

Linear examples without extensive patient history:

A patient presents with a headache and visual auras. **What is the most appropriate treatment?**



What is the most likely diagnosis?



Complete, Clear Question

Stems should be complete sentences ending with a question mark.

INCORRECT:

- Carcinoma:
- In women, carcinoma is usually:

CORRECT:

- In women, what is the most common site of carcinoma?

Why? Because the stem has to pass the “cover test.”

Complete, Clear Question

What is the “cover test”?

If options are covered, the stem should have sufficient information for the test-taker to predict the answer without having to look at the option list.

Focus on a Single Concept

If asked:

Which of the following patients is most likely to have presented with chest pain?

-or-

Patients with Paget disease typically have:

Could you predict the correct answer if the options were covered?

Focus on a Single Concept

Unfocused stem (with mixed options):

What is true about ventricular aneurysms?

- A. Stent placement is most appropriate. (treatment)
- B. The most common cause is transmural myocardial infarction.* (etiology)
- C. Most patients present with hypotension. (presentation)
- D. It is most often seen in patients less than 50 years of age. (prevalence)

Focus on a Single Concept

The key from the previous example: The most common cause is transmural myocardial infarction.

New stem: What is the most common cause of ventricular aneurysm?

- A. Ischemic stroke
- B. Transmural myocardial infarction*
- C. Essential hypertension
- D. Genetic anomaly

Positively Worded Items

- Items should ask for the correct answer, not the incorrect answer.
- Negative phrasing does not pass the cover test.
- Examples to avoid:
 - What is the **LEAST** likely . . . ?
 - Which of the following is **FALSE**?
 - Which of these is **NOT** an indicator . . . ?
 - All of the following are true **EXCEPT**:

When Negative Phrasing is Needed

- Negatively worded items should only be used for adverse events, differential diagnoses, or techniques that could cause harm.
 - For example:
 - Which of the following should be **EXCLUDED** from the differential diagnosis?
 - A patient presents with kidney disease. What radiopharmaceutical should **NOT** be administered?

Objectively Worded Items

All items should be objectively written, based on fact and not opinion.

INCORRECT:

A patient is referred to **you** from an outside hospital for evaluation of hemoptysis. Based on the CT findings, **what would you do first?**

CORRECT:

A patient presents with hemoptysis. Based on the CT findings, **what is the most appropriate next step?**

Direct Question - What vs “WotF”

- What is the most common presenting symptom of X illness?

VS

- Which of the following is associated with X illness?

- What type of artifact is shown?

VS

- Which of the following statements about the image is true?

Option Attributes

- Same category
- Same part of speech
- Similar in length and structure
- Plausible to some degree
- Supported by medical research
 - At least one credible reference is required to support the key.

Same Category

INCORRECT: Mixed options

Patients with multiple myeloma commonly have which of the following?

- A. Complete response with induction chemotherapy (treatment response)
- B. Fever on presentation (presentation)
- C. Thrombocytopenia with thalidomide (treatment response)
- D. Initial presentation with bone pain (presentation)

Same Category

Create two focused items:

- In patients with multiple myeloma, what is the rate of complete response after induction chemotherapy?
- What is the most common presenting symptom of patients with multiple myeloma?

Same Part of Speech

The options should all be in the same part of speech. For example:

What is the most appropriate next step in management?

INCORRECT:

- A. Obtain a radiograph
- B. Performing MRI
- C. Observation
- D. The patient should be sent home.

CORRECT:

- A. Radiography
- B. MRI
- C. Observation
- D. Discharge

Similar Length and Structure

A pediatric patient presents with colloid cysts. What is the most appropriate treatment?

- A. Surgery to relieve hydrocephalus and decrease the risk for clinical status deterioration*
- B. Antibiotics
- C. Compression
- D. Fine-needle aspiration

Direct and Focused Options

Which of the following statements about metastatic lung disease is true?

- A. Lymphangitic spread of breast cancer in a lung can be arrested.
- B. Patients with metastatic lung disease have been shown to benefit from surgical removal of the metastatic disease.*
- C. A nuclear radiology scan is the most effective study to detect candidates for resection of pulmonary metastases.
- D. The pulmonary metastatic disease must be limited to only one lobe of one lung.

Example (continued)

Metastatic lung disease from what type of primary tumor is most effectively treated by resection?

- A. Invasive carcinoma of the breast
- B. Soft tissue sarcomas*
- C. Ovarian cancer
- D. Brain cancer

Plausible to Some Degree

- A feasible option for consideration by the unprepared or underprepared test-taker
- A rational and logical *wrong* answer the test-taker might guess if no choices were provided
- A real thing; no invented terms or phrases

Things to Avoid

- Multiple and overlapping parts
- Overlapping numerical ranges
- Pairs
- Outliers

Multiple and Overlapping Parts

INCORRECT:

The carcinoma shown is most likely to metastasize to what organ(s)?

- A. Lungs
- B. Lungs and heart*
- C. Lungs, heart, and brain
- D. Kidneys

Multiple and Overlapping Parts

CORRECT:

The carcinoma shown is most likely to metastasize to the **lungs** and what other organ?

- A. Heart*
- B. Brain
- C. Pancreas
- D. Kidneys

Overlapping Numerical Ranges

What is the overall survival after adjunctive chemotherapy?

INCORRECT:

- A. 5% to 10%
- B. 10% to 15%
- C. 15% to 20%
- D. 20% to 25%
- E. 25% to 30%

CORRECT:

- A. < 5%
- B. 5% to 10%
- C. 15% to 20%
- D. 25% to 30%
- E. > 30%

Pairs

INCORRECT:

A 35-year-old man presents with a sudden, severe headache. What is the most appropriate initial imaging?

- A. Unenhanced CT*
- B. Contrast-enhanced CT
- C. MRI
- D. Radiography

Pairs

CORRECT:

A 35-year-old man presents with a sudden, severe headache. What is the most appropriate initial imaging?

- A. Unenhanced CT*
- B. Contrast-enhanced CT
- C. MR angiography
- D. MR venography

Outliers

- Credible option that stands out from the rest

What is the most likely diagnosis?

- A. Schwannoma
- B. Meningioma
- C. Paraganglioma*
- D. High-riding jugular bulb

More Option Types to Avoid

- Yes/No
- True/False
- All of the above/None of the above
- Combinations
 - (A and D, A and B only)
- Sequenced lists

Comments and Queries

- Communication with writers
- Questions and suggestions for improvement
- Revision ideas
- Examples:
 - Can option X be revised to avoid the appearance of a pair with the key?
 - Option X does not appear to “fit” with the other options, which makes it stand out and could serve as a “trick.” Can it be revised?

Item Readiness Checklist

CONCEPT	YES	NO
Clear, articulable, single concept	✓	
Linear, chronological stem	✓	
Direct question with complete sentences	✓	
Options are similar in concept, length, and structure	✓	
Options are distinct or paired and balanced	✓	
Acronyms are approved or spelled out	✓	



Thank You!

Questions? Contact Editing staff at Editing@theabr.org