



AMERICAN BOARD OF DERMATOLOGY

APPLIED KNOWLEDGE EXAM QUESTIONS

Samples for In-Training and Certification Exam Candidates

SAMPLE 1: ONE BEST OPTION TYPE

A 26-year-old woman has severe, cystic, scarring acne and is being treated with oral isotretinoin. Her weight is 80 kg and BMI is 27 kg/m². Her primary form of birth control is an oral contraceptive and secondary form is barrier protection with condoms. Treatment with isotretinoin 40 mg daily orally is initiated. After one month, the dosage is increased to 80 mg daily. On follow-up examination one month later, she says that her lips and eyes are dry; she reports no other adverse effects. Laboratory studies show:

	Baseline	After 1 month of therapy	After 2 months of therapy
HCG	negative	negative	negative
AST (U/L)	30	38	40
ALT (U/L)	24	31	31
HDL (mg/dL)	45	43	47
LDL (mg/dL)	160	165	170
Triglycerides (mg/dL)	170	230	300

Which of the following is the most appropriate recommendation at this time?

- A. Continue isotretinoin at the current dose and measure serum lipid concentrations in two weeks.
- B. Decrease the isotretinoin dose to 40 mg daily.
- C. Discontinue isotretinoin.
- D. Change primary contraceptive method to intrauterine device.
- E. Change primary contraceptive method to progestogen implant.

Answer: A

Item critique:

This item tests the ability of the examinee to manage complications of therapy in a medically appropriate and cost-effective manner. The patient's triglycerides are increasing on oral isotretinoin therapy. Option (A), continuing therapy and closely monitoring triglyceride levels, is best. There is no evidence that a temporary increase in triglycerides to 300 mg/dL will have a clinically significant adverse effect in this context, but continued monitoring to ensure that the triglycerides do not rise to dangerous levels is advisable. Option (B), decreasing the dose, will prolong her course of therapy, thereby increasing expense and increasing the time when she is at risk for pregnancy while on isotretinoin. Option (C) is not necessary and denies her access to a therapy that may be the most helpful for her severe acne. While the oral contraceptive might be contributing to hypertriglyceridemia, changing her contraception (options (D) and (E)), is unnecessarily cumbersome and expensive and could expose her to increased risk of pregnancy during the transition.



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SAMPLE 2: SELECT ONE APPROPRIATE COURSE OF ACTION FROM THE FOLLOWING OPTIONS. THERE MAY BE MORE THAN ONE OPTION THAT IS ACCEPTABLE. HOWEVER, ONLY ONE OPTION SHOULD BE SELECTED.

A 3-year-old girl is brought to the clinic by her mother because she has had warts on her hands for the past two months. The warts are asymptomatic, but the patient's mother requests treatment because they are "ugly". Physical examination shows eight verrucous papules that are 3 to 6 mm in size on the dorsal aspect of the fingers and hands. The periungual skin is affected.

Which of the following is the most appropriate initial management option? Select ONE appropriate course of action from the following options. There may be more than one option that is acceptable. However, only ONE option should be selected.

- A. Contact sensitization
- B. Observation only
- C. Topical salicylic acid
- D. Topical imiquimod
- E. Application of cantharidin
- F. Cryotherapy
- G. Pulsed dye laser therapy
- H. Injection of Candida antigen

Answer: Either B or C are acceptable options.

Item critique:

This item tests the examinee's ability to assess factors, such as patient age, developmental status, number and location of warts, and prior therapies, that are important to consider when choosing appropriate treatments for warts. Because warts are benign and in this case, not symptomatic, waiting for natural resolution, option (B) is appropriate. Salicylic acid treatments, option (C), are easy to use, non-traumatic for a young child, and can be effective when used properly. When dealing with benign conditions in young children, one must compare the benefits and downsides of the treatment with what the child can understand and tolerate. While options (F) and (G) may be effective, the painful nature of these treatments may be too traumatic for a young child. In addition, cryotherapy could lead to nail dystrophy if not performed correctly. Option (E), application of cantharidin, can lead to larger ring or donut warts when the initial warts are larger than 4-5 mm. There is insufficient evidence to support options (A), (D), or (H) as first-line treatment of common warts.



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**SAMPLE 3: WHICH TWO OF THE FOLLOWING OPTIONS ARE APPROPRIATE NEXT STEPS?
SELECT EXACTLY TWO OPTIONS.**

A 40-year-old otherwise healthy woman is referred to the clinic for treatment of a lesion on her upper abdomen. Her primary care physician had performed a 3 mm punch biopsy of the lesion. The biopsy report showed nodular basal cell carcinoma. The lesion is 1.5 cm in diameter and clinically appears consistent with basal cell carcinoma. It has not previously been treated. Which TWO of the following options are the most appropriate treatments?



- A. CO₂ laser ablation
- B. Cryotherapy
- C. Electrodesiccation and curettage
- D. Excision
- E. Mohs micrographic surgery
- F. Radiation therapy
- G. Topical imiquimod
- H. Topical 5-fluorouracil
- I. Vismodegib

Answer: C and D

Item critique:

This item tests the ability of the examinee to access factors, including age and health of the patient, site of the lesion, and histology of the lesion to determine the most appropriate treatment of a basal cell skin cancer. For a primary nodular BCC, the most effective treatments are electrodesiccation and curettage (option C), excision (option D), and Mohs micrographic surgery (option E). Mohs micrographic surgery is not indicated in this case because its benefits of tissue sparing and lower rates of recurrence are not as critical for lesions on the trunk, and it is more expensive than options C or D. CO₂ laser (option A), cryotherapy (option B), and radiation (option F), although generally effective therapies, are not quite as effective as options C, D or E. In addition, radiation therapy may increase the risk for basal cell carcinoma developing at the site several years later and therefore is not an optimal choice for a young, healthy person. Topical therapies (options G and H) may be appropriate for superficial BCC but are not as effective for nodular BCC. Vismodegib (option I) is intended primarily for inoperable BCC.



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FAQs FOR RESIDENTS

How can I best prepare for the Applied Knowledge section of the exam?

- The best preparation is going to clinic and on hospital rounds, learning through your own experiences with patients and through observation of how more seasoned practitioners approach patient care. It may also be helpful to review consensus and evidence-based practice guidelines.

What advice can you give about how to answer these questions?

- Think about what you would actually do if you saw the patient in real life, and answer the question accordingly. Do not try to second-guess what the ABD “wants” you to answer.
- Do not assume a question that seems simple is actually complex or is a trick question. If it seems straightforward, it probably is.
- Do not automatically choose the rarest condition. You may expect common conditions to be well represented in the exam.
- Do not order more tests than medically appropriate. Practicing cost-effective medicine is part of being a good physician.

Who decides what the correct answers are?

- In some cases, there is a strong evidence base to support particular choices.
- In many cases, there is not a sufficiently robust evidence base, and best responses are determined by consensus of experts.