

Genetic Dilemmas in Primary Care

About CME Credit

The deadline for CME credit has expired as of June 30, 2004.

This program is designed for primary care clinicians, including family physicians, internists, obstetrician/ gynecologists, pediatricians and advance practice nurses. After viewing the videotape, participants will:

- Have an increased awareness of the psychological and social implications of genetic testing.
- Have an increased understanding of the current accuracy, reliability, and implications of genetic testing in general, with specific emphasis on testing for inherited breast and ovarian cancer, cystic fibrosis and familial adenomatous polyposis.
- Understand the concept of an expanded informed consent process for genetic testing that will promote meaningful dialogue between caregiver and patient and facilitate shared decision-making.

The activity has been planned and implemented in accordance with the Essential Areas and Policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint sponsorship of the College of Physicians and Surgeons of Columbia University and The Hastings Center.

The College of Physicians and Surgeons is accredited by ACCME to provide continuing medical education to physicians. The College of Physicians and Surgeons designates this educational activity for a maximum of 2 hours in Category 1 Credit towards the AMA Physician's Recognition Award. Each physician should claim only those hours of credit that he/she actually spent in the educational activity.

There is no discussion of specific products in this program.

How to Obtain CME Credit

The deadline for CME credit has expired as of June 30, 2004.

Completion of both the Post-test and the Program Evaluation are required for CME credit.

1. Print out and complete the Post-test and the Program Evaluation Answer Sheets.
2. Send both completed answer sheets with a check for \$20 payable to Columbia University to:

Center for Continuing Education (Psych #902)
Columbia University, College of Physicians & Surgeons
630 West 168th Street, Unit 39
New York, NY 10032-3702

Twelve correct answers are required to receive credit. Upon completion of these requirements, the College of Physicians & Surgeons of Columbia University will issue a certificate and return your corrected quiz for your permanent records.

CME Post-test and Program Evaluation

CME Post-test

Genetic Dilemmas in Primary Care

The deadline for CME credit has expired as of June 30, 2004.

Select the single best answer to each question and record your responses on the Post-test Answer Sheet (pages 8-9). When completed, mail the Post-test Answer Sheet (pages 8-9) and the Evaluation Answer Sheet (pages 13-15) to:

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Columbia University, College of Physicians & Surgeons
630 West 168th Street, Unit 39
New York, NY 10032-3702

You will also need to include one check for \$20, payable to Columbia University, for both answer sheets.

Twelve correct answers are required.

Questions

1. A 40-year-old woman with no family history of breast cancer requests testing for the 'breast cancer gene' stating that she wants to know her genetic status so that she can potentially avoid screening mammography. In counseling this patient about genetic testing, it would be appropriate to:
 - a. inform her that a negative test result for mutations in BRCA1 and BRCA2 would not eliminate her risk of breast cancer and that a woman of her age should be following mammography screening recommendations regardless of the results of genetic testing.
 - b. inform her that a negative test result for mutations in BRCA1 and BRCA2 would cut her risk of developing breast cancer in half but not eliminate it altogether.
 - c. inform her that although most women who have developed breast cancer test positive for mutations in BRCA1 or BRCA2, most of the women who test positive don't develop breast cancer.
 - d. inform her that there is no role for genetic testing for mutations in BRCA1 and BRCA2 in the absence of a family history of breast cancer.

2. In most cases a genetic test result gives only probabilistic information. There are multiple sources of uncertainty in these tests. Which of the following is /are correctly defined:
- a. "Penetrance" refers to the likelihood that a given gene mutation will actually result in symptoms of the disease.
 - b. "Variable expressivity" is a measure of the number of different gene mutations related to a given disorder
 - c. "Sensitivity" is the proportion of those individuals who have the mutation who actually get a positive test result for that mutation.
 - d. Both a and c.
3. Which of the following diseases follows an autosomal dominant pattern of inheritance?
- a. Inherited breast cancer
 - b. Familial adenomatous polyposis
 - c. Cystic Fibrosis
 - d. Both a and b
4. A 35 year old woman presents with a family history that includes a mother who was diagnosed with breast cancer at age 65 and subsequently died, and a sister diagnosed at 42 who is currently in treatment. She asks if she should be tested for the "breast cancer gene."
- a. She should be discouraged from genetic testing because the test results would make no difference in her clinical management.
 - b. She should be strongly encouraged to undergo genetic testing for BRCA1 and BRCA2 as the current medical standard upon which to base your clinical approach.
 - c. This patient can be appropriately managed either with or without genetic test results, so the choice to be tested should be hers.
 - d. This family history is a strong indication that the patient carries a mutation in BRCA1 or BRCA2 and therefore testing can add no useful information.

5. You suspect a patient may have familial adenomatous polyposis and discuss the possibility of genetic testing with the patient. The patient responds that he has no family history of FAP and asks why he would need a genetic test. You explain that:
- A spontaneous mutation of the APC gene occurs in about 1/3 of cases of familial adenomatous polyposis
 - Spontaneous mutations develop during embryogenesis in an individual and therefore FAP can present without an associated family history
 - FAP is always associated with a family history of colon cancer but testing is done because family members may have died of other causes before the FAP manifested.
 - Both a and b
6. In most cases involving gene testing, a patient should receive genetic counseling from a physician, nurse or genetic counselor
- Before the patient receives the test results
 - When the patient receives the test results
 - Only if the test result is positive
 - Before a decision to undergo testing is made
7. In cases of prenatal testing, when one person in a couple tests positive as a carrier for an autosomal recessive genetic condition
- The other person in the couple should receive the most sensitive testing available for that condition
 - The other person needs to undergo testing only if both members of the couple have the same ethnic background
 - The couple should be referred for genetic counseling
 - a and c

8. Which of the following are considered potential benefits of genetic testing for some individuals?
- a. relief from uncertainty
 - b. increased sense of control by the patient
 - c. targeted screening, recommendations and prevention
 - d. all of the above
9. Current policies and standards endorse the genetic testing of minors
- a. whenever the parents request it
 - b. only if the minor is old enough to understand the nature of the test
 - c. only when there is a medical intervention available that is likely to be beneficial to the child
 - d. based on the same criteria used for the testing of adults
10. Genetic testing requires an expanded informed consent process because
- a. results of genetic tests are more likely to impact family members of the patient both medically and psychologically
 - b. genetic tests can give false negative as well as false positive results
 - c. genetic tests may be offered even when there is no medical intervention available that is likely to be beneficial.
 - d. All of the above

True or False:

11. Accurate interpretation of genetic testing for familial adenomatous polyposis requires that the specific APC gene mutation in the family must be identified in a symptomatic family member before testing an asymptomatic person.
12. There are psychological benefits for some patients who test positive for a genetic mutation, even in the absence of available medical treatment, and these benefits alone can justify the testing.
13. An appropriate informed consent process for genetic testing would include a discussion of the psychological risks involved, except in cases where there is a clear medical benefit to having the information that the test will yield.
14. Medical management based on a false negative result in a patient tested for a mutation of the APC gene causing familial adenomatous polyposis can cause significant psychological problems, but is not life threatening.
15. As of December 2001, employment discrimination due to results of genetic testing is no longer a concern, as all fifty states have now enacted comprehensive, effective antidiscrimination legislation.
16. Informing patients about the range of emotional reactions that others have experienced with genetic testing may help them to anticipate ways they may feel that they had not previously considered, as they decide whether or not to undergo testing.
17. In cases when there is a clear medical benefit associated with genetic testing, clinicians are required to reveal a positive test result to potentially affected family members, even if the patient does not wish to share the information.
18. Because of the high level of technological expertise required to perform genetic analysis, the results obtained from different genetics labs are highly uniform.

Post-test ANSWER SHEET for CME Credit

Genetic Dilemmas in Primary Care (Psych #902)

The deadline for CME credit has expired as of June 30, 2004.

Instructions: Use this answer sheet to complete the Post-test (questions start on page #3). Mail your completed answer sheet (pages 8-9) along with the Evaluation Answer Sheet (pages 13-15) to:

Center for Continuing Education (Psych #902)
Columbia University, College of Physicians & Surgeons
630 West 168th Street, Unit 39
New York, NY 10032-3702

You will also need to include one check for \$20, payable to Columbia University, for both answer sheets. Answer sheets must be received by 6/30/04 to receive CME credit.

Name – First _____ Last _____

Degree _____

Specialty _____

Mailing Address _____

City _____ State _____ ZIP _____

Telephone (_____) _____

Signature _____

Time Spent on this Activity – Hours _____ Minutes _____

Please **circle** the single best answer to each question.

1.	a	b	c	d
2.	a	b	c	d
3.	a	b	c	d
4.	a	b	c	d
5.	a	b	c	d
6.	a	b	c	d
7.	a	b	c	d
8.	a	b	c	d
9.	a	b	c	d
10.	a	b	c	d
11.	True	False		
12.	True	False		
13.	True	False		
14.	True	False		
15.	True	False		
16.	True	False		
17.	True	False		
18.	True	False		

Program Evaluation

Genetic Dilemmas in Primary Care

Please answer these questions using the Evaluation Answer Sheet (pages 13-15). When completed, mail the Evaluation Answer Sheet (pages 13-15) and the Post-test Answer Sheet (pages 8-9) to:

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Questions

1. What is your profession?
2. Highest degree completed or Degree program currently attending?
3. At what stage is your career?
(Training completed, fellowship, resident, intern/extern, attending degree program?)
4. What is your therapeutic area of practice?
(Family Practice, Internal Medicine, OBGYN, Pediatrics, other?)
5. Number of years in practice?

Questions 6-9: Did the material presented meet the following educational objectives?

6. Increased your awareness of the psychological and social implications of genetic testing? *(Yes or No)*
7. Increased your understanding of the accuracy, reliability and implications of genetic testing in general? *(Yes or No)*
8. Increased your understanding of the accuracy, reliability and implications of genetic testing for breast/ovarian cancer, cystic fibrosis and familial adenomatous polyposis? *(Yes or No)*
9. Increased your understanding of the concept of an expanded informed consent process for genetic testing? *(Yes or No)*

10. How would you rate this program on its relevance to your clinical practice?

- a) Excellent b) Good c) Fair d) Poor

11. Rate the program in terms of its ability to hold your interest.

- a) Excellent b) Good c) Fair d) Poor

12. Was the material presented in a clear and understandable fashion?

- a) Excellent b) Good c) Fair d) Poor

Please answer questions 13-17 using the following scale:

- a) Never
- b) About once a year
- c) Once a month
- d) Once a week
- e) More often than once a week

13. How often have you initiated a conversation about genetic testing with a patient?

14. How often have you received requests or inquiries about genetic testing from a patient?

15. How often have you ordered genetic tests?

16. How often have you referred a patient for genetic counseling?

17. How often do you personally counsel patients about genetic testing?

18. After viewing this video, will you be better prepared to counsel patients and their families about genetic testing?

- a) Definitely b) Possibly c) Unlikely d) Definitely not

19. Are you likely to change your practice in any of the following areas after viewing this program? (Yes or No)

- a. More likely to seek out information about genetic testing?
- b. More likely to initiate counseling of your patients about genetic testing?
- c. More likely to refer patients to genetic counseling?
- d. More likely to expand the informed consent process for genetic testing?
- e. More likely to consider the effects of genetic testing on children and adolescents?
- f. More likely to emphasize with patients the privacy and confidentiality issues related to genetic testing?

20. Overall, how would you rate this video?

- a) Excellent b) Good c) Fair d) Poor

21. Would you recommend this video to a colleague?

- a) Definitely b) Possibly c) Unlikely d) Definitely not

22. The most valuable part of this videotape was ...

23. The least valuable part of this videotape was ...

24. Was the program presented objectively?

Evaluation ANSWER SHEET for CME Credit

Genetic Dilemmas in Primary Care (Psych #902)

The deadline for CME credit has expired as of June 30, 2004.

Instructions: Use this answer sheet to complete the Program Evaluation (questions start on page #10). Mail your completed answer sheet (pages 13-15) along with the Post-test Answer Sheet (pages 8-9) to:

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Columbia University, College of Physicians & Surgeons
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Please **fill in the blank** or **circle** the single best answer to each question.

1. _____
2. _____
3. _____
4. _____
5. _____

6.	Yes	No			
7.	Yes	No			
8.	Yes	No			
9.	Yes	No			
10.	a	b	c	d	
11.	a	b	c	d	
12.	a	b	c	d	
13.	a	b	c	d	e
14.	a	b	c	d	e
15.	a	b	c	d	e
16.	a	b	c	d	e
17.	a	b	c	d	e
18.	a	b	c	d	
19.a	Yes	No			
19.b	Yes	No			
19.c	Yes	No			
19.d	Yes	No			
19.e	Yes	No			
19.f	Yes	No			
20.	a	b	c	d	
21.	a	b	c	d	

22. _____

23. _____

24. _____

