

16:10-16:30

미국예방정책국특별위원회 (USPSTF)의 유방암 검진지침 개정안

서울대학교병원 영상의학과

조나리아

2009년 11월 16일 미국 보건부 자문 기구인 예방정책국 특별위원회 (The United States Preventive Services Task Force: USPSTF)에서 유방암 검진 지침을 *annals of internal medicine* (Ann Intern Med. 2009;151:716-726) 에 발표하였으며 그 내용은 다음과 같다.

〈권고안〉

1. 40-49세 여성의 “routine screening mammography”에 대해 반대하며, 50세 이전의 여성에서 2년에 한번씩의 규칙적인 스크리닝 유방촬영술을 시작할지의 여부는 위험과 이익에 관해 개별적인 평가를 한 후 고려해야 함 (Grade C).
2. 50-74세 여성은 2년에 한번씩 스크리닝 유방촬영술을 받도록 권고 (Grade B).
3. 75세 이상의 여성에 스크리닝 유방촬영의 추가적인 이익이나 위험을 평가하는 증거는 부족함 (I statement).
4. 40세 이상의 여성에서 스크리닝 유방촬영술 이외에 Clinical breast examination (의사의 촉진)의 이익과 위험을 평가하는 증거가 부족함 (I statement).
5. 의사들이 여성들에게 유방암 자가진단법을 교육하는 것에 반대함 (Grade D).
6. 필름유방촬영술 대신 디지털 유방촬영술 또는 MRI의 추가적인 이익이나 위험을 평가하는 증거가 부족함 (I statement).

Table 1. What the USPSTF Grades Mean and Suggestions for Practice

Grade	Definition	Suggestions for Practice
A	The USPSTF recommends the service. There is high certainty that the net benefit is substantial.	Offer/provide this service.
B	The USPSTF recommends the service. There is high certainty that the net benefit is moderate or there is moderate certainty that the net benefit is moderate to substantial.	Offer/provide this service.
C	The USPSTF recommends against routinely providing the service. There may be considerations that support providing the service in an individual patient. There is moderate or high certainty that the net benefit is small.	Offer/provide this service only if other considerations support offering or providing the service in an individual patient.
D	The USPSTF recommends against the service. There is moderate or high certainty that the service has no net benefit or that the harms outweigh the benefits.	Discourage the use of this service.
I statement	The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of the service. Evidence is lacking, of poor quality, or conflicting, and the balance of benefits and harms cannot be determined.	Read the clinical considerations section of the USPSTF Recommendation Statement. If the service is offered, patients should understand the uncertainty about the balance of benefits and harms.

〈연구 방법〉

구체적으로 USPSTF는 유방암의 5가지 스크리닝 검사법 (필름유방촬영술, 유방의 이학적 검사법, 자가진단법, 디지털 유방촬영술, 유방 MRI)의 유방암 사망률 감소의 효용성에 대한 systematic evidence review를 아래 두가지 연구에 초점을 맞춰 수행하였다.

1. 스크리닝의 이익과 위험에 대한 6가지 질문에 대한 systematic evidence review

2. 스크리닝 유방촬영의 시작점과 끝나는 시기에 대한 것, 주기 (매년 vs. 2년에 한번)에 대한 성적 (expected health outcomes)과 필요 자원 (resource requirements) 비교를 위한 Population modeling techniques 분석.

새로운 권고안은 증상이 없는 일반 여성의 예방정책에 대한 권고를 의미하며 이러한 예방 정책에 대한 이익과 위험에 대한 체계적 리뷰와 그 결과 나타난 순수한 이익만을 평가하여 이를 기반으로 권고안을 마련하였으며,

Figure 1. Screening for breast cancer using film mammography: clinical summary of USPSTF recommendation

Annals of Internal Medicine			
SCREENING FOR BREAST CANCER USING FILM MAMMOGRAPHY CLINICAL SUMMARY OF U.S. PREVENTIVE SERVICES TASK FORCE RECOMMENDATION			
Population	Women Aged 40-49 Years	Women Aged 50-74 Years	Women Aged ≥75 Years
Recommendation	Do not screen routinely. Individualize decision to begin biennial screening according to the patient's context and values.	Screen every 2 years.	No recommendation.
	Grade : C	Grade : B	Grade : I (insufficient evidence)
Risk Assessment	This recommendation applies to women aged ≥40 years who are not at increased risk by virtue of a known genetic mutation or history of chest radiation. Increasing age is the most important risk factor for most women.		
Screening Tests	Standardization of film mammography has led to improved quality. Refer patients to facilities certified under the Mammography Quality Standards Act(MQSA), listed at www.fda.gov/cdrh/mammography/certified/html .		
Timing of Screening	Evidence indicates that biennial screening is optimal. A biennial schedule preserves most of the benefit of annual screening and cuts the harms nearly in half. A longer interval may reduce the benefit.		
Balance of Harms and Benefits	There is convincing evidence that screening with film mammography reduces breast cancer mortality, with a greater absolute reduction for women aged 50 to 74 years than for younger women. Harms of screening include psychological harms, additional medical visits, imaging, and biopsies in women without cancer, inconvenience due to false-positive screening results, harms of unnecessary treatment, and radiation exposure. Harms seem moderate for each age group. False-positive results are a greater concern for younger women; treatment of cancer that would not become clinically apparent during a woman's life (overdiagnosis) is an increasing problem as women age.		
Rationale for No Recommendation (I statement)	Among women 75 years or older, evidence of benefit is lacking.		
Relevant USPSTF Recommendations	USPSTF recommendations on screening for genetic susceptibility for breast cancer and chemoprevention of breast cancer are available at www.preventiveservices.ahrq.gov .		

임상의사나 정책입안자들은 이러한 근거를 이해해야 하지만, 어떤 상황의 환자에 대한 결정은 개별적인 상황에 따라 결정해야 한다고 부연하였다.

Figure 2. Screening for breast cancer using methods other than film mammography : clinical summary of USPSTF recommendation

Annals of Internal Medicine				
SCREENING FOR BREAST CANCER USING METHODS OTHER THAN FILM MAMMOGRAPHY CLINICAL SUMMARY OF U.S. PREVENTIVE SERVICES TASK FORCE RECOMMENDATION				
Population	Women Aged ≥ 40 Years			
Screening Method	Digital Mammography	Magnetic Resonance Imaging (MRI)	Clinical Breast Examination (CBE)	Breast Self-Examination (BSE)
Recommendation	Grade : I (insufficient evidence)			Grade : D
Ration ale for No Recommendation or Negative Recommendation	Evidence is lacking for benefits of digital mammography and MRI of the breast as substitutes for film mammography.		Evidence of CBE’ s additional benefit, beyond mammography, is inadequate.	Adequate evidence suggests that BSE does not reduce breast cancer mortality.
Considerations for Practice				
Potential Preventable Burden	For younger women and women with dense breast tissue, overall detection is somewhat better with digital mammography.	Contrast-enhanced MRI has been shown to detect more cases of cancer in very high-risk populations than does mammography.	Indirect evidence suggests that when CBE is the only test available, it may detect a significant proportion of cancer case.	
Potential Harms	It is not certain whether overdiagnosis occurs more often with digital than with film mammography.	Contrast-enhanced MRI requires injection of contrast material. MRI yields many more false-positive results and potentially more overdiagnosis than mammography.	Harms of CBE include false-positive results, which lead to anxiety, unnecessary visits, imaging, and biopsies.	Harms of BSE include the same potential harms as for CBE and may be larger in magnitude.
Costs	Digital mammography is more expensive than film.	MRI is much more expensive than mammography.	Costs of CBE are primarily opportunity costs to clinicians.	Costs of BSE are primarily opportunity costs to clinicians.
Current Practice	Some clinical practices are now switching to digital equipment.	MRI is not currently used to screen women of average risk.	No standard approach or reporting standards are in place.	The number of clinicians who teach BSE to patients in unknown; it is likely that few clinicians teach BSE to all women.