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GENERAL MEDICINE AND AMBULATORY CARE

Mary P. Harward, MD, FACP

CHAPTER 2

When I see a new patient, I find it valuable, at the first meeting, consciously to look at the hands. Clues to diseases in the nervous system, heart, lung, liver, and other organs can be found there.... In medicine, a hand is never merely a hand; symbolically it is much more. That is why the "laying on of hands" is so important for the physician and patient.

John Stone (1936–2008)
"Telltale Hands" from
In the Country of Hearts: Journeys in the Art of Medicine, 1990

It's the humdrum, day-in, day-out everyday work that is the real satisfaction of the practice of medicine; ... the actual calling on people, at all times and under all conditions, the coming to grips with the intimate conditions of their lives, when they were being born, when they were dying, watching them die, watching them get well when they were ill, has always absorbed me.

William Carlos Williams (1883–1963)
"The Practice" from
The Autobiography of William Carlos Williams, 1951

LISTENING TO THE PATIENT

1. What interviewing skills can help the physician identify all the significant issues for the patient?

Remaining open-ended and encouraging the patient to "go on" until all the pertinent issues have been expressed by the patient. Other facilitative techniques to keep the patient talking include a simple head nod or saying, "and" or "what else?" Continue these facilitative techniques until the patient says, "nothing else." During the opening of the interview, the physician can listen to the patient's "list" of the concerns for that visit, without focusing on specific signs and symptoms at that time. Physicians too often interrupt the patient and direct the remaining interview, only focusing on what the physician deems important. A patient may have other, significant issues that are not immediately expressed, and the physician may miss this "hidden agenda" if the patient is interrupted. Once the patient has listed the concerns, the patient and physician can then decide which ones will be addressed at that visit and which ones can be deferred to future visits.

2. How can the physician understand more clearly what the patient is trying to describe?

By rephrasing the patient's response in the physician's words or simply restating what the patient said. Sometimes the physician simply needs to ask, "Can you find other words to describe your pain?" Emotional responses and pain are particularly difficult to put into words.

3. What questions help characterize a symptom?

- **Where** does the symptom occur?
- **What** does it feel like?
- **When** does the symptom occur?
- **How** is it affected by other things you do?
- **Why** does the symptom occur (what brings the symptom on)?
- **What** makes the symptom better?

EVALUATING THE TESTS

4. Define sensitivity and specificity of tests.

- **Sensitivity:** The percentage of patients who have the disease that is being tested and have a positive test result
- **Specificity:** The percentage of patients who do not have the disease and have a negative test result

5. What are the positive and negative predictive values of tests?

- **Positive predictive value:** The percentage of patients who have a positive test result and have the disease that is being tested
- **Negative predictive value:** The percentage of patients who have a negative test result and do not have the disease

6. How are these values calculated?

See Fig. 2.1.

		Disease:		
		Present	Absent	
Test result	+	a	b	a = True positive b = False positive
	-	c	d	c = False negative d = True negative
Sensitivity	=	$\frac{a}{a+c}$	= Percentage of patients who have the disease and test positive	
Specificity	=	$\frac{d}{b+d}$	= Percentage of persons who do not have the disease and test negative (True-Negative).	
Positive predictive value	=	$\frac{a}{a+b}$	= Percentage of patients who test positive and actually do have the disease.	
Negative predictive value	=	$\frac{d}{c+d}$	= Percentage of patients who test negative and really do not have the disease.	

Fig. 2.1. Calculation of sensitivity, specificity, and predictive value.

7. What is the NNT?

The number needed to treat that quantifies the number of patients who will require treatment with a therapy (with possibly no benefit to an individual patient) in order to ensure that at least one patient benefits from the therapy, usually defined as no occurrence of the adverse event or events that the therapy should prevent. Most publications now include this number. There is no absolute NNT that is appropriate for all therapeutic decisions, but it will depend on the risks of the therapy, the benefits of treatment, and the patient's goals for treatment. In general, the higher the NNT, the less effective the therapy.

SCREENING FOR MALIGNANCIES

8. What are the recommendations for colon cancer screening?

The U.S. Preventive Services Task Force (USPSTF) recommends performing at least one of multiple screening procedures beginning at age 50 years and continuing through age 75 years. For patients of average risk who are asymptomatic, the physician may consider:

- gFOBT (guaiac-based fecal occult blood test): Every year
- FIT (fecal immunochemical test): Every year
- FIT-DNA (multitargeted stool DNA test): Every 1–3 years
- Colonoscopy: Every 10 years (if no polyps on previous colonoscopy)
- CT (computed tomography) colonography: Every 5 years
- Flexible sigmoidoscopy: Every 5 years
- Flexible sigmoidoscopy with FIT: Flexible sigmoidoscopy every 10 years + FIT every year

Screening is not recommended after age 86 years. For patients aged 76–84 years, individual health, risk factors, and previous findings at screening should be considered before recommending screening procedure. Other organizations such as the National Comprehensive Cancer Care Network and American Gastroenterology Association have different recommendations.

Burt RW, Cannon JA, David DS, et al. Colorectal cancer screening. *J Natl Compr Onc Netw*. 2013;11:1538–1575.

Rex DK, Johnson DA, Anderson JC, et al. American College of Gastroenterology guidelines for colorectal cancer screening 2009. *Am J Gastroenterol*. 2009;104:739–750.

U.S. Preventive Services Task Force, Bibbins-Domingo K, Grossman DC, Curry SJ, et al. Screening for colorectal cancer: U.S. Preventive Services Task Force recommendation statement. *JAMA*. 2016;315:2564–2575.

9. What are the guidelines for breast cancer screening?

The most recent guidelines (2016) from the USPSTF for screening asymptomatic women with conventional mammography are summarized as:

Age	Recommendation
40–49 years (y)	Individual decision made by the woman based on her preferences
50–74 y	Every 2 years
≥75 y	No recommendation because of insufficient evidence

The USPSTF based these recommendations after review of the available evidence that mammograms reduce mortality and morbidity risks. The recommendations also considered the potential harms from screening including false-positive results and unnecessary biopsies. These guidelines are regularly updated. The American Cancer Society (ACS) recommends beginning annual screening at age 45 and continuing until age 55. Biennial screening should begin at age 55.

Oeffinger KC, Fontham ET, Etzioni R, et al. Breast cancer screening for women at average risk: 2015 guideline update from the American Cancer Society. *JAMA*. 2015;314:1599–1614.

U.S. Preventive Services Task Force. Screening for breast cancer: U.S. Preventive Services Task Force Recommendation Statement. *Ann Intern Med*. 2016;164:279–297.

10. How should childhood cancer survivors be screened for breast cancer?

For this group who received chest radiation, mammography should begin at age 25 years or 8 years after chest radiation exposure, whichever is earlier. Mammograms should be continued annually.

Oeffinger KC, Ford JS, Mokowitz CS, et al. Breast cancer surveillance practices among women previously treated with chest radiation for a childhood cancer. *JAMA*. 2009;301:404–414.

11. What are the controversies related to prostate cancer screening?

The prostate-specific antigen (PSA) currently used for prostate cancer screening does not have sufficient evidence to support its routine use in men of *average risk* for prostate cancer. False-positive and false-negative PSA tests occur. The evidence is also unclear as to whether treatment of prostate cancer, when discovered, prolongs life. Prostate cancer screening decisions should be made on an individual basis. As with mammograms, not all expert groups concur with the USPSTF recommendations. Currently trials are under way to try to more clearly identify appropriate prostate cancer screening tests.

U.S. Preventive Services Task Force. Screening for prostate cancer: U.S. Preventive Services Task Force Recommendation Statement. *Ann Intern Med*. 2012;157:120–135.

Wolf AM, Wender RC, Etzioni RB, et al. American Cancer Society guideline for the early detection of prostate cancer: update 2010. *CA Cancer J Clin*. 2010;60:70–98.

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12. When should screening begin for cervical cancer?

At age 21 years. A Papanicolaou (Pap) smear every 3 years is the appropriate screening test. If women aged 30 to 65 years wish to undergo screening less frequently, the interval can be extended to every 5 years with the use of a Pap smear and human papillomavirus (HPV) tests. The USPSTF recommends ending screening in women after age 65 years if they have had appropriate routine screening.

U.S. Preventive Services Task Force, Moyer VA. Screening for cervical cancer: U.S. Preventive Services Task Force Recommendation Statement. *Ann Intern Med.* 2012;156:880–891.

13. Do women who have had a total hysterectomy (with cervix removal) for nonmalignant reasons need Pap smears?

No. The yield of finding significant disease in this population is low.

14. Is there an effective screening test for ovarian cancer?

No, not at this time, although this is an area of active research. Although the pelvic examination, transvaginal ultrasound, and the tumor marker CA-125 have all been used as screening tests, none has been shown to reduce death from the disease.

15. What is the role of chest x-rays and computed tomography scans in lung cancer screening?

Although chest x-rays are not effective for lung cancer screening, the National Lung Screening Trial (NLST) showed that annual low-dose chest CT (LDCT) scans showed a reduction in lung cancer and all-cause mortality rate for patients who are:

- Age 55–79 years
- Current smoker OR former smoker who quit within the past 15 years
- Smoker for at least 30 pack-years (currently or former)
- Asymptomatic

The USPSTF recommends continuing screening until age 80 and discontinuing screening when a significant life-limiting illness develops or the patient has not smoked for 15 years. Centers for Medicaid and Medicare Services (CMS) covers LDCT for those meeting the above criteria and are 55–77 years old.

National Lung Screening Trial Research Team, Aberle DR, Adams AM, et al. Reduced lung-cancer mortality with low-dose computed tomographic screening. *N Engl J Med.* 2011;365:395–409.

U.S. Preventive Services Task Force: Lung cancer screening. Available at: <https://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/lung-cancer-screening>; December, 2013. [accessed 22.01.17].

CARDIOLOGY

16. What is the first step to evaluate a patient with an initial blood pressure (BP) reading of 150/90 mm Hg?

Confirm that the BP was measured under the right conditions including:

- Comfortable seating in a chair
- Uncrossed legs, feet resting on the floor
- Support of patient's back and arm for BP measurement
- No clothing covering the area of the cuff placement
- Middle of the cuff placed on the upper arm across from the midpoint of the sternum
- Waiting 5 minutes after the patient is seated comfortably (and remaining quiet) before measuring the BP
- Adequate cuff size for the patient's arm (cuff bladder length is 80% and width is 40% of the patient's arm circumference)
- Recording at least two measurements 30 seconds apart
- Measurement of the BP in both arms at initial visit

Multiple measurements at different times of the day (and possibly different settings) should be done to confirm the elevated BP. Home and work site measurements and ambulatory BP recordings are also helpful for hypertension confirmation.

LeBlond RF, Brown DD, Suneja M, et al. *DeGowin's Diagnostic Examination*. 10th ed. New York: McGraw-Hill; 2015.

17. What can cause a difference in BP between the right and the left arm?

Arterial occlusion in the arm with the lower BP (subclavian artery stenosis), thoracic outlet syndrome, or aortic dissection. "Normal" BP difference should be <10 mm Hg. The arm with the higher reading should be used for future measurements. Sometimes no cause is found.