Rheumatoid arthritis Dx, bariatric surgery and mortality, prostate cancer screening

Medicine in Brief **summarizes discoveries, clinical tests, or guidelines published in internal medicine literature that can affect psychiatric patients and practice. This information is intended to help you:**

- keep current with important developments in internal medicine
- knowledgeably discuss these developments with medical colleagues
- determine when to refer patients to a primary care physician or specialist
- manage psychiatric issues while your patients undergo evaluation or treatment for a medical condition.

Robert M. McCarron, DO
Series Editor

Rheumatoid arthritis: A new diagnostic approach

Principal Source: Nishimura K, Sugiyama D, Kogata Y, et al. Meta-analysis: diagnostic accuracy of anti-cyclic citrullinated peptide antibody and rheumatoid factor for rheumatoid arthritis. *Ann Intern Med* 2007;146:797-808.

Discussant: Robert M. McCarron, DO

Up to 70% of patients with rheumatoid arthritis (RA) have a comorbid depressive or anxiety disorder, and depression is estimated to be 2 to 3 times more prevalent in RA patients than in the general population.[1] Until recently, rheumatoid factor (RF)—an antibody directed against a specific portion of immunoglobulin G—was the only serologic test for RA. Although included in American College of Rheumatology diagnostic criteria, RF has a relatively low specificity for RA (85%).

A new test—the anti-cyclic citrullinated peptide antibody (anti-CCP)—is highly specific for RA (96%) and thus less likely than RF to give a false-positive result. RF often is detected in non-RA patients, including the elderly and persons with hepatitis C, Sjögren syndrome, and systemic lupus erythematosus. The anti-CCP test's sensitivity (67%) is roughly equal to that of RF (69%).

Anti-CCP can rule out other conditions that might mimic RA[2]—such as osteoarthritis (***Table 1, page 62***)—and is a key diagnostic tool to identify early-onset RA. Early detection of RA can lead to a timely primary care referral, use of disease-modifying medications, and improved clinical outcome.

A single test result is not a definitive RA diagnosis (***Table 2, page 62***). A variety of physical, laboratory, and radiologic findings are required to make the diagnosis and initiate therapy. If your patient's pain is consistent with RA, however, consider ordering a serum RF and anti-CCP to assist the primary

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Table 1

Is joint pain rheumatoid arthritis (RA) or osteoarthritis (OA)?

Observation	RA	OA
Joints involved	MCP, PIP	DIP
Joint complaints	'Boggy,' soft, tender	Bony hypertrophy
Joint stiffness	Worse after prolonged rest	Painful after exercise
Radiographic changes	Decalcification and erosion	Joint space narrowing
Laboratory findings	Positive anti-CCP	Normal anti-CCP

anti-CCP: anti-cyclic citrullinated peptide antibody; DIP: distal interphalangeal; MCP: metacarpophalangeal; PIP: proximal interphalangeal

Table 2

American College of Rheumatology diagnostic criteria for rheumatoid arthritis (RA)*

Criteria	Comments
Morning stiffness	Duration of ≥1 hour after prolonged inactivity indicates a severe inflammatory process
Arthritis involving ≥3 joints	Usually metacarpophalangeal (MCP), proximal interphalangeal (PIP), wrist, elbow, knee, and ankle joints, rarely the lower back or shoulder; look for soft tissue swelling or effusion in the area of the affected joint
Arthritis of the hand	≥1 MCP, PIP, or wrist joint is involved
Symmetric arthritis	Initial symptoms may be asymmetric, and absolute symmetry is not needed for a diagnosis
Rheumatoid nodules	Size and degree of tenderness of subcutaneous nodules over bony prominences or tendons is variable
Serum rheumatoid factor (RF)	RF has low specificity for RA compared with anti-cyclic citrullinated peptide antibody (anti-CCP); although a positive anti-CCP test is not formally part of the diagnostic criteria, it should be part of a RA assessment
Radiographic changes	Usually of the hand or wrist; bony erosions and localized decalcifications are indicators of RA

* RA diagnosis requires presence of ≥4 criteria. The first 4 must have been present ≥6 weeks. Also consider the anti-CCP test an important diagnostic marker

Source: Reference 4

Clinical Point

Consider screening for RA if your patient complains of joint pain or stiffness that is worse in the morning or after inactivity

care practitioner with prompt diagnosis and treatment. Both erythrocyte sedimentation rate and C-reactive protein have low specificity for RA and should not be included as part of the diagnostic workup.

RA diagnosis. RA is an autoimmune disorder that causes joint pain and deformity, multiple extra-articular manifestations, and disability. It affects 1% to 2% of Americans and 3 times as many women as men. Most adult RA patients initially present with joint swelling and pain between ages 35 to 55.[3]

Consider screening for RA if your patient complains of joint pain or stiffness that is worse in the morning or after several hours of inactivity. Although atypical presentations occur, the presence of these RA characteristics warrant further inquiry:[4]

- a first-degree relative with RA
- symmetrical joint involvement
- peripheral joint involvement such as metacarpophalangeal (MCP) joints
- proximal interphalangeal (PIP) or wrist joints involvement
- age >35 years.

Osteoarthritis (OA) is characterized by bony hypertrophy, whereas with RA af-

fected joints tend to feel slightly warm, soft or "boggy," and are painful to the touch. Patients with OA usually do not have PIP joint pain but instead experience tenderness over the distal interphalangeal (DIP) joints.

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Related Resources

- American College of Rheumatology. www.rheumatology.org.
- Arthritis National Research Foundation. www.curearthritis.org.

Practice Points

- **Although most psychiatrists do not diagnose and treat a patient for RA, a basic understanding of diagnostic criteria can inform your decision to refer your patient to a primary care practitioner.**
- **Many patients with RA also suffer from depression and anxiety and should be assessed for psychiatric disorders. Consider ordering anti-CCP and serum RF tests when you suspect a patient has RA.**
- **The anti-CCP test is associated with fewer false-positive results than RF serum tests.**
- **Early morning stiffness that lasts ≥1 hour and symmetrical MCP and PIP joint pain can indicate RA.**

Disclosure

Dr. McCarron is a consultant to Eli Lilly and Company.

Bariatric surgery for obesity: Does it decrease mortality?

Principal Source: Omalu BI, Ives DG, Buhari AM, et al. Death rates and causes of death after bariatric surgery for Pennsylvania residents, 1995 to 2004. *Arch Surg* 2007; 142(10):923-8.

Discussant: Glen L. Xiong, MD

Many obese patients suffer from depression, bipolar disorder, panic disorder, personality disorders, or other psychiatric conditions.[1] Morbidly obese patients searching for a lasting solution to their weight problems might seek a psychiatric evaluation for bariatric surgery. However, before giving the green light for the procedure, consider that a recent study questions if bariatric surgery decreases mortality in obese patients.

Most bariatric surgery practice guidelines require evaluation and treatment of comorbid psychiatric conditions such as eating disorders, depression, and substance use disorder, which can worsen postoperative outcomes. Indications for bariatric surgery include a body mass index (BMI) ≥40 kg/m^2 or ≥35 kg/m^2 with significant obesity-related comorbid medical conditions, such as diabetes (***Table 3***).

A large-scale epidemiologic study found that bariatric surgery patients had a higher long-term risk of dying from coronary artery disease and suicide than the general population (***Table 4, page 64***).[2] Bariatric surgery patients also have a higher mortality rate than the general population, although

Table 3

Body mass index (BMI) values

Obesity class	BMI
Underweight	<18.5 kg/m^2
Normal	18.5 to 24.9 kg/m^2
Overweight	25 to 29.9 kg/m^2
Mild obesity	30 to 34.9 kg/m^2
Moderate obesity	35 to 39.9 kg/m^2
Morbid obesity	≥40 kg/m^2

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Clinical Point

Bariatric surgery patients had a higher long-term risk of dying from coronary artery disease and suicide than the general population

Table 4

Leading medical causes of death after bariatric surgery

	30-day mortality n = 150	Overall mortality* n = 395
Surgical complication	28 (25.3%)	45 (11.4%)
Pulmonary embolism	31 (20.7%)	47 (11.9%)
Coronary artery disease	26 (17.3%)	76 (19.2%)
Sepsis	17 (11.3%)	55 (13.9%)

* Up to 9 years of follow-up
Source: Reference 2

Clinical Point

For most obese patients, lifestyle modification and medication management produce modest, nonsustained results

they may have an absolute 1% survival advantage over closely matched obese patients who do not have the surgery.[3] This advantage might disappear when selection bias is controlled, however, because patients who undergo surgery are more motivated to improve their health than patients who remain obese.

Of 16,683 bariatric operations performed in Pennsylvania over 10 years, 440 (2.6%) patients died. Nearly 1% of these deaths occurred within 30 days. The total death rate was approximately 1% per year and almost 6% at 5 years. In addition to the medical causes, 45 bariatric patients died from traumatic causes:

- 16 suicides (4%)
- 14 drug overdoses (3%)
- 10 motor vehicle accidents (2%)
- 3 homicides (0.7%)
- 2 falls (0.5%).

Women accounted for 10 of the 16 suicides (62.5%) and 12 of the 14 (85.7%) drug overdoses.

Treatment options. When treating obese patients, choose medications with a low risk for weight gain, which may include switching to a medication in the same class that is less likely to cause weight gain. Also, give patients educational handouts and resources about dietary and exercise regimens that focus on behavioral reinforcement. Although important, lifestyle modification and medication management produce nonsustained and modest results for most obese patients. Benefits are even more limited in morbidly obese patients with BMI ≥40 kg/m^2.

Bariatric surgery is an emerging treatment option for obese patients, although its use has been limited by safety concerns, availability, and lack of coverage by many insurance companies. Among obesity treatments, only bariatric surgery has demonstrated enduring weight loss and reduced medical comorbidities such as diabetes.[4]

A new epidemic. The prevalence of obesity—nearly 1 in 3 Americans—has increased dramatically over the last few decades for reasons that include dietary indiscretion and sedentary lifestyle.[5] Obesity is associated with decreased life expectancy,[6] reduced quality of life, and higher incidence of diabetes, hypertension, arthritis, cardiovascular disease, sleep apnea, gastroesophageal reflux disease, and other chronic medical conditions. In addition, metabolic side effects of some psychotropic medications—especially antipsychotics—can exacerbate weight gain.

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5. Ogden CL, Carroll MD, Curtin LR, et al. Prevalence of overweight and obesity in the United States, 1999–2004. *JAMA* 2006;295:1549-55.
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Related Resources

- American Society for Bariatric Surgery. Pre-surgical psychological assessment of bariatric surgery candidates. www.asbs.org/html/pdf/PsychPreSurgicalAssessment.pdf.

continued on page 67

continued from page 64

- National Heart Lung and Blood Institute. Body mass index calculator. www.nhlbisupport.com/bmi/bmicalc.htm.
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Disclosure

Dr. Xiong reports no financial relationship with any company whose products are mentioned in this article or with manufacturers of competing products.

Practice Points

- **Do not recommend bariatric surgery for patients with unstable psychiatric symptoms and psychosocial conditions or those who cannot follow up with postoperative care and required lifestyle modifications.**
- **Evaluate obese patients for psychiatric symptoms and suicidal thoughts because bariatric surgery patients may have an elevated risk of suicide.**
- **Consider referring patients with a BMI≥40 kg/m^2 or a ≥35 kg/m^2 with significant obesity-related comorbid medical conditions for bariatric surgery.**
- **Bariatric surgery patients have an increased risk of coronary disease-related adverse events, so refer bariatric surgery patients to primary care providers for follow-up.**

What you need to know about PSA screening for prostate cancer

Principal Source: Harris R, Lohr KN. Screening for prostate cancer: an update of the evidence for the U.S. Preventive Services Task Force. *Ann Intern Med* 2002; 137(11):917-29.

Discussant: Weber Chen, MD

All men age >65—including psychiatric patients—are at higher risk for prostate cancer. The prostate-specific antigen (PSA) blood test can detect prostate cancer early and decrease mortality but often returns a false positive. Because this can increase a patient's anxiety and lead to unnecessary procedures, consider the psychological impact of waiting for PSA test results as well as possible risk factors for prostate cancer (***Table 5***).[1] Refer patients at high risk or those with elevated PSA levels to primary care physicians for evaluation.

PSA testing. The PSA blood test is the screening method of choice for detecting prostate cancer. Before the test's release in 1992, most prostate cancers were identified at an advanced and incurable state. Because early-stage prostate cancer has few signs or symptoms, PSA screening can identify localized and potentially curable disease.

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Despite its benefits, PSA screening in prostate cancer is controversial.

- Detection of clinically insignificant cancers may lead to unnecessary treatments.
- An elevated PSA lacks specificity. Despite an increased likelihood of prostate cancer in men with moderately elevated PSA (4 to 10 ng/ml), biopsy usually reveals benign prostatic hyperplasia (BPH) rather than prostate cancer.
- No randomized studies have confirmed that PSA screening decreases prostate cancer mortality. It is not clear that early detection and treatment changes the natural history and outcome of the disease.[2]

Table 5

Risk factors for prostate cancer

Age	>65
Race	African-American
Genetics	Family history and hereditary prostate cancer (HPC-1) and predisposing for cancer of the prostate (PCP) genes
Diet	High animal fat
Hormone	High serum testosterone levels

Source: Reference 1

continued

Clinical Point

No randomized studies have confirmed that PSA screening decreases prostate cancer mortality

PSA originally was introduced as a tumor marker to detect cancer recurrence or disease progression after treatment. However, it became an important cancer screening tool by the early 1990s and led to a spike in the incidence of prostate cancer, peaking in 1992.[3] Most of these newly diagnosed cancers were clinically localized or organ confined, which led to an increase in radical prostatectomy and radiation therapy.

PSA and cancer risk. PSA is a glycoprotein produced by prostate epithelial cells. The upper limit of normal PSA levels is 4 ng/ml. The positive predictive value for prostate cancer at PSA levels between 4 and 10 ng/ml is approximately 25% but increases to 42% to 64% at PSA levels >10 ng/ml.[4] Nearly 75% of cancers detected within the "gray zone"—PSA values between 4 and 10.0 ng/ml—are organ confined and potentially curable. At PSA values >10 ng/ml less than half of cancers detected are organ-confined.[1]

Studies show that PSA elevations precede clinical disease by an average of 5 years.[5] PSA elevations may occur with other benign conditions particularly BPH and prostatitis. Digital rectal exams (DRE), ejaculation, prostate biopsy, and acute urinary retention also can cause elevated PSA levels.

Should your patient be tested? The American Cancer Society recommends PSA screening and DRE for men age ≥50 who have ≥10 years life expectancy. Men at higher risk, such as African-Americans and those with a family history of prostate cancer, should begin testing between ages 40 and 45.

Prostate cancer is the most frequently diagnosed cancer in men in the United States. Each year more than 200,000 cases are diagnosed, and approximately 25,000 prostate cancer patients die. Prostate cancer is the second leading cause of cancer death in men after lung cancer and is usually diagnosed in men age <65. For an American male, the lifetime risk of developing prostate cancer is 1 in 6, but the risk of dying from prostate cancer is 1 in 3.[6]

Clinical Point

Studies show that PSA elevations precede clinical disease by an average of 5 years

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Related Resources

- National Cancer Institute. Prostate Cancer. www.cancer.gov/cancertopics/types/prostate.
- Emedicine.com. Prostate cancer. www.emedicine.com/urology/index.shtml#prostate.
- National Comprehensive Cancer Network. www.nccn.org.

Disclosure

Dr. Chen reports no financial relationship with any company whose products are mentioned in this article or with manufacturers of competing products.

Practice Points

- **If your patient has any urinary changes or an abnormal PSA, err on the side of caution and refer to a primary care provider.**
- **Despite the risk of false positives, PSA remains a powerful biomarker and should be used to screen for prostate cancer.**
- **PSA screening can help patients and physicians choose the optimal course if treatment is indicated.**