

---

## Pathology

### Five Things Physicians and Patients Should Question

by  
Canadian Association of Pathologists  
Last updated: August 2022



**1 Don't perform population based screening for 25-OH-Vitamin D deficiency.**

Vitamin D deficiency is common in many populations, particularly in patients at higher latitudes, during winter months and in those with limited sun exposure. Over the counter Vitamin D supplements and increased summer sun exposure are sufficient for most otherwise healthy patients. Laboratory testing is appropriate in higher risk patients when results will be used to institute more aggressive therapy (e.g., osteoporosis, chronic kidney disease, malabsorption, some infections).

**2 Don't screen women with Pap smears if under 21 years of age or over 69 years of age.**

Follow provincial guidelines for cervical cancer screening. Screening before the recommended age of initiation (age 21 in most provinces), screening women over the age of 69, or annual screening is not recommended.

**3 Avoid routine preoperative laboratory testing for low risk surgeries without a clinical indication.**

Most preoperative laboratory tests (typically a complete blood count, prothrombin time and partial thromboplastin time, basic metabolic panel and urinalysis) performed on elective surgical patients are normal. Findings influence management in under 3% of patients tested. In almost all cases, no adverse outcomes are observed when clinically stable patients undergo elective surgery, irrespective of whether an abnormal test is identified. Preoperative laboratory testing is appropriate in symptomatic patients and those with risks factors for which diagnostic testing can provide clarification of patient surgical risk.

**4 Avoid standing orders for repeat complete blood count (CBC) on inpatients who are clinically/laboratorily stable.**

Standing orders for inpatients for CBC testing should be avoided as this can lead to over-testing in relatively stable patients. Particularly in patients with longer term hospital stays, there is some evidence that repeated blood testing can have a negative effect on patients including some increase in anemia. Trauma patients often have blood draws repeated frequently even in the absence of indications of hematologic instability on admission.

**5 Don't send urine specimens for culture on asymptomatic patients including the elderly, diabetics, or as a follow up to confirm effective treatment.**

There is no evidence that antibiotic treatment is indicated in any of these patients. Thus sending urine specimens in asymptomatic patients will only result in inappropriate antibiotic use and increased risk of resistance. The only exceptions are screening of pregnant women early in pregnancy for whom there are clear guidelines for screening/management; and screening for asymptomatic bacteriuria before urologic procedures for which mucosal bleeding is anticipated.

---

## How the list was created

The Canadian Association of Pathologists (CAP-ACP) list of recommendations was developed in conjunction with the Canadian Leadership Council on Laboratory Medicine Laboratory (CLCLM) Utilization Subcommittee, under the joint leadership of the President of CAP-ACP and the President of the Canadian Society of Clinical Chemists (CSCC). The joint committee reviewed the recommendations made by the American Society for Clinical Pathology (ASCP) to the Choosing Wisely US campaign and modified two of those to reflect Canadian practice. Additional recommendations, dealing with cervical cancer screening, standing orders for hematology testing and urine cultures on asymptomatic patients, were added to make up the set of recommendations. The joint committee solicited review and input on these recommendations from the various subspecialty groups in laboratory medicine. Recommendations 1 and 3 were adopted with permission from the Five Things Physicians and Patients Should Question, © 2013 American Society for Clinical Pathology.

---

## Sources

- 1** Bilinski KL, et al. The rising cost of vitamin D testing in Australia: time to establish guidelines for testing. *Med J Aust.* 2012 Jul 16;197(2):90. [PMID: 22794049](#).  
Holick MF, et al. Evaluation, treatment, and prevention of vitamin D deficiency: an Endocrine Society clinical practice guideline. *J Clin Endocrinol Metab.* 2011 Jul;96(7):1911-30. [PMID: 21646368](#).  
Lu CM. Pathology consultation on vitamin D testing: clinical indications for 25(OH) vitamin D measurement. *Am J Clin Pathol.* 2012 May;137(5):831-2. [PMID: 22645788](#).  
Sattar N, et al. Increasing requests for vitamin D measurement: costly, confusing, and without credibility. *Lancet.* 2012 Jan 14;379(9811):95-6. [PMID: 22243814](#).
- 2** Canadian Task Force on Preventive Health Care, et al. Recommendations on screening for cervical cancer. *CMAJ.* 2013 Jan 8;185(1):35-45. [PMID: 23297138](#).  
Canada View. [Cancer screening programs across Canada](#) [Internet]. 2017 Mar 16 [cited 2017 May 5].  
The Society of Obstetricians and Gynecologists of Canada, et al. [Position Statement: Recommendations on screen for cervical cancer](#) [Internet]. 2013 Feb 20 [cited 2017 May 5].
- 3** Capdenat Saint-Martin E, et al. Description of local adaptation of national guidelines and of active feedback for rationalising preoperative screening in patients at low risk from anaesthetics in a French university hospital. *Qual Health Care.* 1998 Mar;7(1):5-11. [PMID: 10178152](#).  
Katz RI, et al. Survey study of anesthesiologists' and surgeons' ordering of unnecessary preoperative laboratory tests. *Anesth Analg.* 2011 Jan;112(1):207-12. [PMID: 21081771](#).  
Keay L, et al. Routine preoperative medical testing for cataract surgery. *Cochrane Database Syst Rev.* 2012 Mar 14;(3):CD007293. [PMID: 22419323](#).  
Munro J, et al. Routine preoperative testing: a systematic review of the evidence. *Health Technol Assess.* 1997;1(12):i-iv; 1-62. [PMID: 9483155](#).  
Reynolds TM, et al. National Institute for Health and Clinical Excellence guidelines on preoperative tests: the use of routine preoperative tests for elective surgery. *Ann Clin Biochem.* 2006 Jan;43(Pt 1):13-6. [PMID: 16390604](#).
- 4** Frye EB, et al. Usefulness of routine admission complete blood cell counts on a general medical service. *J Gen Intern Med.* 1987 Nov-Dec;2(6):373-6. [PMID: 3694295](#).  
Gortmaker SL, et al. A successful experiment to reduce unnecessary laboratory use in a community hospital. *Med Care.* 1988 Jun;26(6):631-42. [PMID: 3132579](#).  
Sandhaus LM, et al. How useful are CBC and reticulocyte reports to clinicians? *Am J Clin Pathol.* 2002 Nov;118(5):787-93. [PMID: 12428801](#).  
Sierink JC, et al. Does repeat Hb measurement within 2 hours after a normal initial Hb in stable trauma patients add value to trauma evaluation. *Int J Emerg Med.* 2014 Jul 10;7:26. [PMID: 25635189](#).  
Thavendiranathan P, et al. Do blood tests cause anemia in hospitalized patients? The effect of diagnostic phlebotomy on hemoglobin and hematocrit levels. *J Gen Intern Med.* 2005 Jun;20(6):520-4. [PMID: 15987327](#).  
Williams SV, et al. A controlled trial to decrease the unnecessary use of diagnostic tests. *J Gen Intern Med.* 1986 Jan-Feb;1(1):8-13. [PMID: 3534168](#).
- 5** American College of Obstetricians and Gynecologists. ACOG Practice Bulletin; No. 91: Treatment of urinary tract infections in nonpregnant women. *Obstet Gynecol.* 2008 Mar;111(3):785-94. [PMID: 18310389](#).  
Mums Health. [Anti-Infective Guidelines for Community-Acquired Infections](#), 13th edition [Internet]. Toronto (ON): MUMS Guideline Clearinghouse; 2013 [cited 2017 May 5].  
Juthani-Mehta, M. Asymptomatic bacteriuria and urinary tract infection in older adults. *Clin Geriatr Med.* 2007 Aug;23(3):585-94, vii. [PMID: 17631235](#).  
Nicolle LE. Asymptomatic bacteriuria: when to screen and when to treat. *Infect Dis Clin North Am.* 2003 Jun;17(2):367-94. [PMID: 12848475](#).  
Nicolle LE, et al. Infectious Diseases Society of America guidelines for the diagnosis and treatment of asymptomatic bacteriuria in adults. *Clin Infect Dis.* 2005 Mar 1;40(5):643-54. [PMID: 15714408](#).

---

## About The Canadian Association of Pathologists

The Canadian Association of Pathologists (CAP-ACP), is a proud partner of the Choosing Wisely Canada campaign. The CAP-ACP was founded in 1949 and has in the years since then played a role in promoting pathology to the national and international health care communities and to Canadian society. CAP-ACP, a voluntary professional organization, advances the interests of our profession and promotes high quality standards for patient care by providing national leadership and promoting excellence in pathology and laboratory medicine practice, education and research.



---

## About Choosing Wisely Canada

Choosing Wisely Canada is the national voice for reducing unnecessary tests and treatments in health care. One of its important functions is to help clinicians and patients engage in conversations that lead to smart and effective care choices.