

LifeLabs®  
**INSIDE**  
DECEMBER 2020

# Diagnos**t**ics **ONTARIO**

THE DIAGNOSTIC NEWSLETTER  
FOR HEALTHCARE PROVIDERS

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# HOLIDAY HOURS

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Please note that we will be CLOSED for the winter break on:

**December**            **25, 26, 27, 28**  
**January**                **1, 2, 3**

We will be CLOSED at 12 PM (Noon) for the winter break on:

**December**                    **24, 31**

Over the winter break the following dates are regular hours:

**December**                    **29, 30**  
**January**                        **4**



# ONTARIO MEDICAL DIRECTOR UPDATE

## CHANGES AT LIFELABS PATIENT SERVICE CENTERS DURING PANDEMIC

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J. Timothy (Tim) Feltis MD FRCPC  
Ontario Medical Director, LifeLabs

Dr. Feltis is the Ontario Medical Director at LifeLabs and is responsible for the supervision and provision of Medical Scientific services in Ontario.

The pandemic has presented a number of challenges for our Patient Service Centres (PSCs) with respect to the booking of patient collections and servicing our patients. As always, the safety of our patients and staff remains at the forefront.

Many of our PSCs have limited space, and as a result, it can be challenging to provide adequate social distancing at all times. This has prompted a move towards temporarily transitioning some of our PSCs to require appointments for specimen collections, and we anticipate this trend will continue.

### Booking Appointments For Sample Collection

We understand this can create problems for Health Care Providers (HCPs), who often send patients directly to the PSC after being seen in the office or virtually.

I would like to ask HCPs for assistance in order to provide the best possible service to your patients.

#### Important

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When a patient books an office / virtual appointment and you feel that laboratory testing will likely be necessary, I would ask that you remind the patient to book an appointment for that day or the next day.

Appointments can be booked:

- Online: [www.LifeLabs.com](http://www.LifeLabs.com)
- Phone: 1 - 877 - 849 - 3637

We will still be able to provide service to walk-in patients at the PSC, but they may have to be booked for a time later in the day.

As we move towards a comprehensive e-ordering system, we hope to assess methods to book the appointment for specimen collection at the time the requisition is e-mailed into the system. This will take time to build, but it will ultimately provide a more streamlined approach that will result in less waiting time for the patient, in conjunction with the high quality laboratory testing that we provide.

### Submitting Requisitions

As discussed in the September issue of the Newsletter (<https://www.lifelabs.com/hcps-newsletter/inside-diagnostics-september-2020/>) we have also taken steps to allow for laboratory requisitions to be e-mailed to a central repository, so that they can be accessed by any PSC in the province. Alternatively, requisitions can also be faxed. Once in the system, the faxed requisitions can be accessed in a similar fashion to the e-mailed requisitions.

#### To E-mail a patient's requisition:

1. Create one e-mail per patient
2. E-mail a PDF copy of the requisition to the dedicated e-mail address [PatientREQSON@lifelabs.com](mailto:PatientREQSON@lifelabs.com)
3. When e-mailing, use the patient's legal first name and last name in the subject line

#### To fax a patient's requisition:

- Please fax one requisition at a time using the following number: 905 - 795 - 9891

#### Important

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If you send the requisition to the patient, you do not need to fax or email a copy to us, as we will be processing the patient's copy.

We aim to process emailed or faxed requisitions within 24 hours of receiving them. Please ask your patients to wait until the next day to visit one of our collection centres. For same-day testing, we recommend that the patient bring a physical copy of the requisition to the PSC.

#### Important

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When filling out laboratory requisitions, it is important that the HCP provide their OHIP billing number, their CPSO number (if applicable) and a signature at the bottom of the requisition. These are requirements that are specified by the Ministry of Health.

Thank you very much for your ongoing support.  
Wishing you safe and healthy holiday season.

**J. Timothy (Tim) Feltis MD FRCPC**  
Ontario Medical Director, LifeLabs

# ANAL CANCER SCREENING OFFERED AT LIFE LABS ONTARIO (PART 1)

The incidence of anal cancer in the general population is less than one case per 100,000. However, when evaluating specific high-risk populations, the rate can be as high as 70 cases per 100,000. Several biological similarities are shared between cervical and anal cancers, including an association with Human Papilloma Virus (HPV) infections.

## Important

Anal cytology is suggested as a screening test for selected patients at higher risk for anal squamous intraepithelial lesions (ASIL). There are no official guidelines regarding anal cytology screening for ASIL.

## Who Should Be Considered for Screening by Anal Pap (High Risk Groups)

- HIV-negative men or women with a history of receptive anal intercourse or anal warts.
- HIV-positive men with a history of anal intercourse or anal warts. Some clinicians screen patients with CD4 counts that are less than 500/mm<sup>3</sup> more frequently.
- HIV-negative women with a history of anal warts, high-grade cervical squamous intraepithelial lesions (SIL)/carcinoma, or vulvar SIL/carcinoma.
- HIV-positive women. Some clinicians screen patients with CD4 counts that are less than 500/mm<sup>3</sup> more frequently.
- Consider screening patients with organ transplants on chronic immunosuppressive agents.
- Women with a history of cervical or vulvar cancer (or high grade cervical lesions), and women participating in receptive anal intercourse.

## When to Start Screening

It is suggested to start screening immunosuppressed patients at age 25 and immunocompromised patients at age 40.

## HPV DNA Testing and Anal Pap Testing

Anal pap smears can detect cytological changes associated with some strains of HPV.

HPV testing is typically performed as part of a Pap test. With modern, liquid-based Pap testing, the same swab sample can be used for both cytology as well as HPV DNA testing.

In select high-risk populations, HPV testing has been shown to be an important and clinically useful screening tool in conjunction with anal Pap testing.

## Patient Preparation Prior to Sampling of Anal Pap:

- Patients are asked not to douche or have an enema or insert anything into their anus for 24 hours prior to an anal cytology exam.
- Lubricants should not be used prior to obtaining a cytology sample because the lubricant may interfere with the processing and interpretation of the sample.

## Sample Collection Procedures for Anal Pap

### Important

For detailed information about collection procedures please visit the LifeLabs web site: [lifelabs/AR\\_PAP\\_Sample](https://www.lifelabs.com/AR_PAP_Sample)

- To obtain an anal sampling, a Dacron swab is inserted approximately 1.5 to 2 inches into the anal canal. Note: It is important not to use a cotton swab, as cells tend to cling to cotton and do not release easily into cytology collection fluids. Moisten the Dacron swab with water, not lubricant.
- The sample is usually obtained with the patient lying on their left side, but other positions are acceptable.
- The buttocks are retracted to visualize the anal opening and a Dacron moistened swab is inserted for approximately 2 to 3 inches into the anus. The swab can be felt to pass through the internal sphincter so the sample is obtained from the junction of the anus and rectum, which is where most of the HPV-related lesions are found. This area is slightly above the region that corresponds anatomically to the dentate line.
- The swab is rotated 360 degrees with firm lateral pressure applied to the end of the swab, such that it is bowed slightly and then it is slowly withdrawn over a period of 15 to 30 seconds from the anus, continuing to rotate the swab in a circular fashion. The lateral pressure ensures that the mucosal surface, rather than rectal contents are sampled.

## Following Collection:

- The swab is placed in a preservative vial and vigorously agitated to disperse the cells for liquid-based cytology.
- The slides are prepared once received in the laboratory and then are examined by the pathologist.
- The sample can be utilized for anal HPV test which is available at LifeLabs.

Please note: "Anal Cytology Reporting and Follow up Guidelines" article will be available in the Winter 2021 issue of the Inside Diagnostics Newsletter.

## Points to Remember

- Incidence of Anal Squamous Intraepithelial Lesion (ASIL) is high in certain populations, including HIV positive and HIV negative individuals with history of receptive anal intercourse, and in immunosuppressed and immunocompromised individuals.
- Anal Pap is a screening tool used to identify ASIL
- LifeLabs provides anal cytology and HPV DNA tests which can be done on the same sample.

## References

1. Salit IE, Lytwyn A, Raboud J, Sano M, Chong S, Diong C, Chapman W, Mahony JB, Tinmouth J. The role of cytology (Pap tests) and human papillomavirus testing in anal cancer screening. *AIDS*. 2010;24:1307-1313. [[PubMed](#)] [[Google Scholar](#)]
2. Jay N, Berry JM, Hogeboom CJ, Holly EA, Darragh TM, Palefsky JM. Colposcopic appearance of anal squamous intraepithelial lesions: relationship to histopathology. *Dis Colon Rectum*. 1997;40:919-928. [[PubMed](#)] [[Google Scholar](#)]
3. Scholefield JH, Ogunbiyi OA, Smith JH, Rogers K, Sharp F. Anal colposcopy and the diagnosis of anal intraepithelial neoplasia in high-risk gynecologic patients. *Int J Gynecol Cancer*. 1994;4:119-126. [[PubMed](#)] [[Google Scholar](#)]

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# AMBULATORY BLOOD PRESSURE MONITORING (ABPM)

High blood pressure (BP) continues to be the largest single contributor to the global burden of disease. It is the most common, readily identifiable, and reversible risk factor for myocardial infarction (MI), stroke, heart failure, atrial fibrillation, aortic dissection, peripheral arterial disease, and cognitive decline. Hypertension (HTN) and high blood pressure are frequently used interchangeably. However, HTN is a specific condition in which blood pressure is consistently higher than normal.

There are several methods to measure and record BP.

## Important

Clinical guidelines recommend to evaluate BP using office measurement (automated or manual) in addition to a Home or Ambulatory Blood Pressure Monitor (ABPM) measurement.

This allows the physician to recognize four patterns of elevated BP (Figure 1).

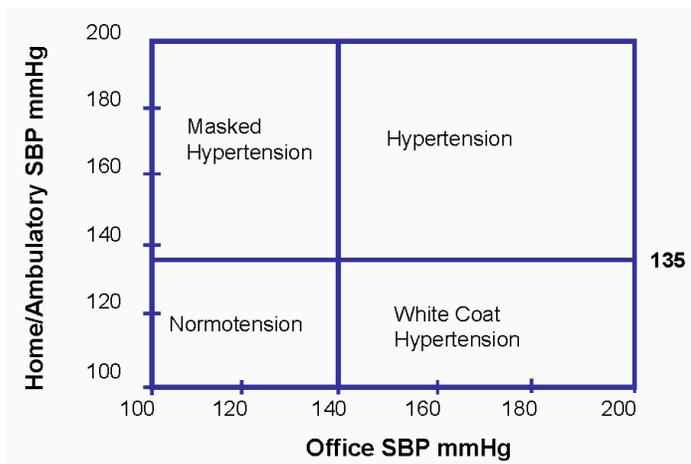


Figure 1. Four Patterns of Elevated BP

Out-of-office measurements are essential to rule out white coat hypertension in patients with or without diabetes, and to diagnose masked hypertension, when suspected. The recognition of those patterns is of great importance because it will influence the treatment decisions, e.g. no treatment in case of white coat hypertension.

Guidelines recommend ABPM as the preferred out of office measurement. ABPM which records BP over 24-hour period has shown to be a better predictor of all- cause and cardiovascular mortality over clinical BP measurement. In addition, ABPM will help clinicians recognise non-dippers, patients whom their BP does not show the regular pattern of dipping during sleeping.

## Indications for ABPM

1. Assessing the presence of white-coat hypertension or masked hypertension.
2. Monitoring of antihypertensive medication efficacy in treated patients.
  - i. Assessing white-coat effect
  - ii. Assessing masked uncontrolled hypertension
3. Assessing the presence of nocturnal hypertension.
4. Evaluation of postural, postprandial and drug induced hypotension.
5. Assessing hypotension from autonomic dysfunction, which typically also requires monitoring during sleep for supine hypertension.



## How to Order

ABPM is available at select LifeLabs Patient Service Centres across Ontario and British Columbia.

Appointments for your patients can be booked by calling our customer care at:

- Ontario: 1-877-849-3637
- BC: 1-855-412-4495

## Reporting

You will receive a detailed visual report within 5-10 days from the end of the monitoring period showing:

- Thresholds for hypertension diagnosis based on ABPM
- Technical details including the average values of readings
- Graphs and bar charts of SBP and DBP over 24-hours
- Interpretation of readings in visual display showing high, acceptable and normal ranges.

## Cost

The cost for ABPM is \$65

## Points To Remember

The advantages of ABPM are:

- Stronger association with hypertension-related target-organ damage and clinical cardiovascular outcomes
- Recommended to confirm the diagnosis of hypertension
- Collection of multiple BP measurements that provide more comprehensive information on BP than is possible with office or home measurements
- Ability to identify BP patterns (i.e. sustained, white-coat, masked, and nocturnal hypertension, and non-dipping or reverse-dipping BP)

## References & Recommended Readings

1. American Heart Association Scientific Statement. Measurement of BP in Humans. Hypertension. 2019;73:35-66.
2. Hypertension Canada's 2020 Comprehensive Guidelines for the Prevention, Diagnosis, Risk Assessment, and Treatment of Hypertension in Adults and Children. Canadian Journal of Cardiology 2020;36:596-624.

## Nader Bactor MBBCh MSc DipM

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# CHANGES TO SERUM ANTIPSYCHOTICS TESTING

A RECENT ADDITION TO LIFELABS GROWING MENU OF MASS SPECTROMETRY BASED TESTS

At LifeLabs, we are dedicated to providing the best service to our patients and healthcare providers.

One way to ensure this is through development of in-house liquid chromatography-tandem mass spectrometry (LC-MS/MS) assays. The LC-MS/MS assays are vetted through rigorous validations and assessments prior to use in patient testing. Our team of technical, scientific, and clinical experts ensures these tests offer high quality and improved turn-around time compared to previously available options.

Urine Broad Spectrum Toxicology screen, serum androstenedione, 17-hydroxyprogesterone, 24-hr urine catecholamines and metanephrines, 24-hr VMA, HVA, and HIAA tests are examples of LC-MS/MS assays developed by our LifeLabs team.

We continually monitor and expand our LC-MS/MS testing menu to ensure it addresses the needs of our patients and healthcare providers.

## Important

Effective Oct 13, 2020, LifeLabs added a panel of atypical anti-psychotics, serum clozapine, olanzapine and quetiapine to our LC-MS/MS testing menu.

## Sample Collection Requirements and Turnaround Time (TAT)

- A trough serum specimen is required for clozapine, olanzapine and quetiapine testing. Specimen should be collected prior to patient's next dose.
- TAT is 10 days

## Therapeutic Range

Analyte	Unit	Therapeutic Range
Clozapine	nmol/L	> 1050*
Total (Clozapine + Norclozapine)	nmol/L	> 1400*
Olanzapine	nmol/L	32 - 256*
Quetiapine	nmol/L	Therapeutic and toxic ranges have not been established. Expected steady-state quetiapine serum levels in patients receiving recommended daily dosages: 261 - 2610 nmol/L

\* There is no change in therapeutic range reporting for these tests compared to previously offered tests

## Testing Methodology

All LC-MS/MS methods are developed by LifeLabs. Their performance characteristics have been fully validated and the tests have been designated fit for use in routine patient testing. The tests have not been submitted to Health Canada for evaluation, and as an in-house validated test, do not require Health Canada approval for diagnostics use.

Your feedback is welcomed as we continue to expand our LC-MS/MS testing menu.

If you have any questions, comments or concerns, please contact our Customer Care Centre: 1-877-849-3637.

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For more information, please visit our site at [www.lifelabs.com](http://www.lifelabs.com)

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