Monkeypox Specimen Collection Guidance

Version 5.2; Released 08/31/2022

1. **For any <u>suspected</u> monkeypox case:**

    - The most updated CDC guidance can be found here: https://www.cdc.gov/poxvirus/monkeypox/index.html

    - Place patient on Contact, Airborne, and Eye Protection Precautions. All persons who enter the room must wear gloves, gown, eye protection, and an N95 respirator or PAPR. Limit room entry to only essential personnel. A patient with suspected or confirmed monkeypox infection should be placed in a single-person room; special air handling is not required unless performing an aerosol-generating procedure (see below). The door should be kept closed (if safe to do so). The patient should have a dedicated bathroom. Transport and movement of the patient outside of the room should be limited to medically essential purposes. If the patient is transported outside of their room, they should use well-fitting source control (e.g., medical mask) and have any exposed skin lesions covered with a sheet or gown. Performance of any aerosol-generating procedures (see Department of Infection Prevention website) should be performed in an airborne infection isolation (i.e. negative pressure) room.

2. **The VUMC Molecular Infectious Disease Laboratory (MIDL) began testing on 8/31/22**

    - **<u>Test type</u>**: Qualitative real time polymerase chain reaction (PCR)
    - **<u>Pathogens detected</u>**: Orthopoxviruses (non-Variola), including Monkeypox virus
        - This test does not discriminate between Monkeypox virus and other zoonotic Orthopoxviruses. However, Monkeypox virus is the only currently circulating Orthopoxvirus. CDC and WHO guidance state that detection of an Orthopoxvirus from a patient with a consistent clinical syndrome is diagnostic for monkeypox.
    - **<u>Specimens</u>**:
        - <u>Preferred:</u> cutaneous lesion swabs in universal / viral transport media (additional details below)
            - **A separate order is needed for each lesion submitted for testing**
        - <u>Alternative</u>: oral swabs, rectal swabs, and genital swabs in universal / viral transport media (additional details below). Results from these sites will be released with a disclaimer.
            - **A separate order is needed for each site submitted for testing**
    - **<u>Turn-around-time</u>**: Within 36 hours of specimen receipt in the laboratory
    - **<u>Results</u>**: Detected, Not Detected, or Indeterminate. No quantification is provided.
    - **<u>Reporting</u>**: Positive results will be automatically reported to the Tennessee Department of Health and VUMC Infection Prevention Department

All monkeypox tests are performed by the VUMC MIDL as of 8/31/22.
Samples are no longer sent to ARUP or the Tennessee Department of Health.

3. How do I order testing?

- Place orders in Epic / eStar using the test name "**MIDL PCR Monkeypox**" or "**LAB6422**"
  - Multiple synonyms will bring up the appropriate test, including Monkeypox, MPX, Pox, Poxvirus, Orthopox, Orthopoxvirus, and Non-Variola
- Place a **separate order** for each lesion and/or anatomic site swabbed.
  - For example, if swabs are taken from two different cutaneous lesions and one from the mouth, three separate orders must be placed. Be sure to indicate the specimen type/source on each separate order. Label each patient specimen with lab-ready labels and submit each sample in its own biohazard specimen bag. Do not send multiple swabs in one bag.
- Include all requested information in the appropriate order fields to ensure this information prints on the specimen labels

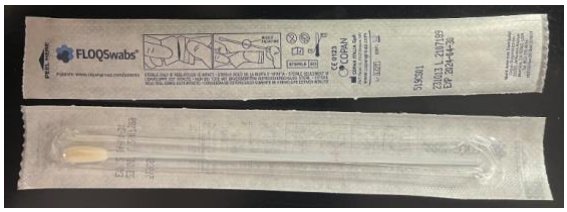
Pre-approvals for testing from the Tennessee Department of Health or Infection Prevention are **no longer** required for monkeypox testing.

Testing is appropriate if the ordering provider determines a clinical presentation may be consistent with monkeypox and requests testing to help rule in or rule out infection with Monkeypox virus.

Infection Prevention will be automatically notified when a Monkeypox order is placed and a "Monkeypox (Suspected)" infection flag will be placed on the patient's chart. This flag will change with positive ("Monkeypox (Confirmed)" flag) or negative (flag removed) results.

4. What supplies are needed to collect the specimen?

- Sterile synthetic swabs (including, but not limited to polyester, nylon, or Dacron) with plastic, wood, or thin aluminum shaft. **(DO NOT use cotton swabs)**. Examples of acceptable swabs are shown in the pictures below:



- Universal / Viral Transport Media (UTM/VTM)
  - 3mL red-top tube (pictured below)

5. **How is the specimen collected?**
    - **<u>Ensure PPE (gloves, gown, eye protection, and an N95 respirator or PAPR) is worn during specimen collection</u>**
    - <u>Collection:</u> Clinicians are encouraged to collect multiple specimens for testing, up to three sites.
        1. Using two sterile synthetic swabs for each lesion, swab the lesion vigorously to collect adequate DNA. It is not necessary to de-roof the lesion before swabbing.
        2. Place the swabs into UTM/VTM collection tubes containing 3mL of media
            - Swabs from the same lesion / site can be placed into the same tube
            - Place swabs from different lesions / sites into separate tubes
        3. Please ensure **each separate tube is individually labeled** with the printed label (containing patient identifiers and specimen location).
        4. Ensure the container is securely closed. **Open or leaking containers will be rejected.**
        5. Place the container in a see-through biohazard specimen bag and seal (zip top) the bag

6. **How do I store the specimen if necessary?**
    - Swabs in UTM/VTM are stable at room temperature for at least 72 hours.
        - Transport specimens at room temperature. Do not send specimens on ice.
    - Refrigerate specimens (2–8°C) if storage for longer than 72 hours is needed.
        - Specimens should be sent for testing sent as soon as possible.

7. **Where should I send specimen?**
    - Send the specimens to the VUMC Microbiology Laboratory as per usual processes.

8. **How will I know if the test is positive?**
    - Results are found in laboratory results of eStar. Results will be listed as “Detected”, “Not Detected”, or “Indeterminate”. If multiple specimens are submitted for testing from a patient and only one is positive (“Detected”), that is consistent with a diagnosis of monkeypox. Indeterminate results may indicate an inhibitory substance present in the specimen (ie blood, stool). Please contact the Laboratory Contact Center to discuss re-testing if needed.

9. **What information should I give to my patient**?

    Persons under investigation (PUI) for monkeypox should **isolate until test results are available**. Presumptive positive and laboratory-confirmed cases should remain isolated until illness and rash have resolved.

    Public health will be conducting case investigations and contact tracing of individuals with laboratory-confirmed monkeypox infection. Patient information sheet available here: https://www.tn.gov/content/dam/tn/health/documents/reportable-diseases/Monkeypox-Tes

Resources:

- Tennessee Department of Health:
  - https://www.tn.gov/health/cedep/reportable-diseases/monkeypox.html
- CDC:
  - https://www.cdc.gov/poxvirus/monkeypox/index.html
- WHO:
  - https://www.who.int/publications/i/item/WHO-MPX-laboratory-2022.1
- Guidance if Exposed to Someone with Monkeypox:
  - https://www.vumc.org/infection-prevention/sites/default/files/public_files/Monkeypox-Contact-Guidance%20%28002%29.pdf
- Guidance if Tested for Monkeypox (Awaiting Results):
  - https://www.vumc.org/infection-prevention/sites/default/files/public_files/Monkeypox-Tested-Guidance%20%28002%29.pdf
- Guidance if diagnosed with Monkeypox:
  - https://www.vumc.org/infection-prevention/sites/default/files/public_files/Monkeypox-Case-Guidance%20%28002%29.pdf