

Cancers of Unknown Origin

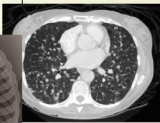
For patients diagnosed with metastatic cancer, the origin of the cancer may be difficult to detect. A variety of diagnostic tests can help doctors pinpoint where the cancer started.

The first level of testing looks at the big picture

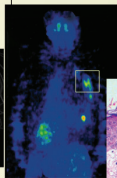
Chest X-ray: Helps determine if cancer is present in the lung.



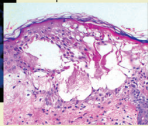
CT scan: Provides a detailed cross-section image of parts of the body to locate tumors.



PET scan: Detects tumors and determines how far the cancer has spread by measuring sugar absorption in the body's tissues.

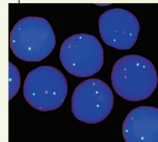


Histology: Based on how the cells look under the microscope, cancers are assigned to a subset with a specific treatment plan.

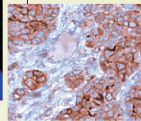


The second level takes an inside look at the cancer cells

Fluorescent in situ hybridization: Uses fluorescent molecules to detect the number of cancer-related genes and their chromosomal positions in tumor cells.



Immunohistochemistry: A staining test that can identify cancer cells by the characteristic proteins on the cell surface and within the nucleus or cytoplasm.



The third level involves tests that determine the genetic makeup of the cancer

Gene expression profiling: Determines patterns of gene activity in the metastatic cancer and makes the best match based on typical patterns known for primary cancer of specific sites.



IMAGE COURTESY OF PATHWORK DIAGNOSTICS



Despite extensive testing, the origin of the cancer remains unknown in about 4 percent of patients.