

Fluorescence In-Situ Hybridization

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To learn more, visit [Dr. Pack's CCR Web site](#).

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What We Do:

FISH uses fluorescent DNA probes to target specific chromosomal locations within the nucleus, resulting in colored signals that can be detected using a fluorescent microscope. The assay can be directly used on fresh or paraffin-embedded interphase nuclei for a rapid evaluation. FISH testing plays an increasingly important role in detecting specific genomic aberrations in neoplasms and has therefore become an indispensable part of the rapidly developing field of personalized medicine. The technique can be applied both de novo discovery and routine detection of specific biomarkers that are associated with the pathogenesis of various hematopoietic and non-hematopoietic malignancies.

The active test menu includes FISH assays for clinically significant chromosomal translocations and amplification:

- rearrangements in ALK, c-MYC, BCL-2, and BCL-6 genes,
- deletion of 1p or 19q chromosomal arms,
- amplification of HER2 (CERBB2) and MET genes.

In addition, the laboratory develops and validates new FISH tests for frequent chromosomal abnormalities in broad range of tumors that have been requested by NCI investigators not available and offered by the outside clinical laboratories.

Instructions for Specimen Submission:

[Download instruction and form for submitting samples for FISH testing](#)

1) In-house Cases

For specimens collected at the NIH Clinical Center, requesting physicians will enter the request for FFPE FISH in the Clinical Research Information System (CRIS) in the same order used for requesting Surgical Pathology services. The box labeled "Tissue FISH Requested" should be checked and the specific tests should be listed in the "Special Instructions" section at the bottom of the order.

2) Outside (Submitted) Cases

If FISH testing is needed on patient blocks or slides submitted from an outside facility for enrollment to a NIH protocol, a CRIS order for "Surgical Pathology – Outside Material", should be entered. The Tissue FISH Requested box should be checked and specific tests entered into the "Special Instructions" box as for specimens collected at NIH. If a CRIS order cannot be entered because the patient is in pre-admit status, fill out an "Outside Tissue Examination Form" (available in the Surgical Pathology Office). This form must be filled out completely and the specific FISH tests listed. Submit the CRIS order or Outside Tissue Examination Form along with the slides/blocks and the outside laboratory's pathology reports. Please include the Outside Case Number, Block ID, and Tissue Source on your request.

Laboratory address:

FISH Section,

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Regular Working Hours:

8:30am - 5:30pm (except federal holidays)