

Cytogenetics Rotation - Objectives

Patient Care

Procedural Skills

1. **Objective:** What procedural skills must be acquired on this rotation?
 - a. Perform all aspects of culture and analysis of one (their own or another's) peripheral blood specimen, including culture initiation, harvest, slide preparation, staining, microscope analysis, and karyotype preparation.
 - b. Observe and participate, where appropriate, in specimen processing and evaluation of each specimen type: amniotic fluids, stimulated peripheral bloods, bone marrow aspirates and leukemic bloods, solid tumors and non-neoplastic tissue specimens.
 - c. Observe and participate in all aspects of the fluorescence in situ hybridization (FISH) procedure, including probe and slide preparation, hybridization and detection procedures, fluorescence microscopy and computer analysis.
2. **Plan:**
 - a. How are the procedural skills taught and by whom?

Procedural skills are taught by actual performance of various cytogenetic techniques and/or observation. These skills are taught by cytogenetic technologists and faculty in cytogenetics.
 - b. Is a specified minimum number of procedures required, and if so, how is this documented?

No specified number.
 - c. What is the level of responsibility and supervision, and how is this documented?

The resident's responsibility is to complete these exercises. This is documented by a Procedural Skills Checklist signed off by a senior technologist who is directly supervising these resident activities.
3. **Supervision/Assessment:**
 - a. How and by whom are the procedures supervised and the skills assessed, and how is this documented?

Procedures are supervised and skills assessed by direct interaction, observation, verbal and written assessment by the senior cytogenetics technologists and faculty in cytogenetics.

Interpretive Skills

1. **Objective:** What interpretive skills must be acquired on this rotation?
 - a. Appreciation of the G-banded karyotype.
 - b. Familiarity with scoring patient specimens evaluated by fluorescence in situ hybridization (FISH).
2. **Plan:**
 - a. How are the interpretive skills taught and by whom?
 1. Completing one's own karyotype
 2. Cutting and analyzing normal and abnormal karyotypes
 3. Participation in fluorescence microscopy and interpretation with cytogenetics faculty and staff.
 - b. What is the level of responsibility and supervision, and how is this documented?

The resident is responsible for completion of these exercises and

is supervised by senior cytogenetic technologists and faculty in cytogenetics.

3. **Supervision/Assessment:**

a. How are the interpretive skills assessed and by whom?

Interpretive skills are assessed by direct daily interaction and interaction at weekly didactic teaching sessions, verbal and written assessment by the senior cytogenetic technologists and faculty in cytogenetics.