**UW Medicine - Pathology**

400-04-01-12

Interphase Fluorescence in Situ Hybridization (IFISH) Scoring Guidelines

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| Adopted Date: 06/06/04  Review Date: 06/12/09  Revision Date: 08/12 |

PURPOSE

The following distinctions are important for uniformity of communication about IFISH results in general and particularly in database recording and reporting.

PROCEDURE

### Principles of IFISH Scoring

* + - 1. **Signal Parameters**
         1. For purposes of scoring, signal patterns of cells should be considered semantically distinct from cells (nuclei). Signal patterns have properties of color and number and should be categorized and recorded based on these properties. For example a cell is described by the signal pattern only: “2 red, 2 green”. An exception is the term “fusion” which should be considered descriptive and not diagnostic, e.g., before a case is finalized “fusion” is equivalent to saying “yellow”. Occasionally, depending on the target and/or probe, additional properties may be considered, like cell morphology, signal intensity, proximity, shape, and size.
         2. Cell classification by the above criteria is to be considered a preliminary finding. Although signal patterns may be consistent with what is expected for a normal or abnormal cell, should not be considered truly normal or abnormal at this point. Analysis is not considered complete until more than one scorer has analyzed the case.

**Cell Categories**

1. There should be only 4 categories of cells: 1-Normal, 2-Abnormal, 3-Other and 4-Uninformative.
2. Cells in the “Other” category have an atypical pattern but are greater than that pattern’s established reference range for the probe in normal controls. For example: a high number of single fusion cells where the expected abnormal is the presence of dual fusions. The presence of “Other” category cells should always have a comment in the final report. Any cells that might be scored as other but which fall within the expected cutoffs for that signal pattern get classified and included in either the normal or abnormal pools and are a part of the total number of cells analyzed for a case.
3. The “Uninformative” cells (also called unclassified) are cells that are rejected because they do not meet minimum criteria for scoring, e.g., overlapped cells, high background, etc. They are not counted as part of the analysis.
4. "Abnormal" cells in laboratory parlance are understood to be cells with any signal not considered "normal". Keep in mind that there may be more than one abnormal signal pattern for a given probe. For example a high number of single fusion cells when using a dual fusion probe. Consult the reference range for the particular abnormal signal pattern before reporting as abnormal.

**3. Scoring**

a. Each case must have 2 readers. Each reader should read 100 cells. Readers should not go in search of abnormal cells, to get an accurate percentage of abnormal vs. normal, once the reader has begun reading, every consecutive readable cell should be scored until 100 cells are reached. **If two readers have different results a 3rd reader must be asked to score the case.**

Written By: Director Approval:

(Signature and Date) (Signature and Date)

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Cytogenetics Supervisor

**UW Medicine - Pathology**

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**SIGNATURE PAGE FOR POLICIES AND PROCEDURES**

Procedure / Policy Title: Interphase Fluorescence in Situ Hybridization (IFISH) Scoring Guidelines

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| **STAFF NAME**: (printed) | **STAFF SIGNATURE** | **DATE REVIEWED** |
| Chen, Xiaoqin |  |  |
| Darrin, Delores |  |  |
| DeHoogh-Grigsby, Debi |  |  |
| Donovan, Chris |  |  |
| Kraus, Jean |  |  |
| Liu, Yuhua |  |  |
| McInnis, Donna |  |  |
| Mohapatra, Itu |  |  |
| Morgan, Catherine |  |  |
| Pilger, Carrie |  |  |
| Staley, Rong |  |  |
| Stampalia, Ann |  |  |
| Villiers, Catherine |  |  |
| Vogel, Jared |  |  |
| Wang, Sharon |  |  |
| Whalen, Sara |  |  |
| Zhou, Yang |  |  |
|  |  |  |