Turnaround Time
Average turnaround time is 24 to 48 hours, Monday through Friday. Specimens received prior to 3 pm will be read the following day. Samples received prior to 3 pm on Friday will be reported out Monday.
STAT FISH analysis can be arranged for Saturday.

FISH Analysis May Be Done On The Following Specimen Types
Bone marrow aspirate
Direct (unstained) bone marrow smear or destained bone marrow smear
Peripheral blood
Amniotic fluid, chorionic villi sample, products of conception
Fresh tissue
Formalin-fixed, paraffin-embedded, non-decalcified tissue (selected probes only, see below)

### Hematologic Cancer DNA FISH Probes

#### Acute myelogenous leukemia
- **RUNX1T1/RUNX1 (ETO/AML1) dual color, dual fusion probe**
  - t(8;21)
- **PML/RARA dual color, dual fusion probe**
  - t(15;17)
- **CBFB dual color, breakapart probe**
  - inv(16), t(16;16)
- **MLL dual color, breakapart probe**
  - t(11q23)
- **BCR/ABL1 dual color, dual fusion probe**
  - t(9;22)

#### Myelodysplastic syndrome/Acute myeloid leukemia
- **ERG1/D5S23, D7S486/CEP7, CEP 8, D20S108**
  - 5q-/-5, 7q-/-7, +8, 20q-
  - These probes may be ordered separately or as a panel

#### Chronic myelogenous leukemia
- **BCR/ABL1 dual color, dual fusion probe**
  - t(9;22)

#### Hypereosinophilic syndrome
- **CHIC-2 deletion, FIP1L1-PDGFRA tri-color rearrangement probe**
  - 4q12 CHIC-2

#### Acute lymphoblastic leukemia
- **ETV6/RUNX1 ES (TEL/AML1) dual color, single fusion probe with extra signal**
  - t(12;21)
- **MLL dual color, breakapart probe**
  - t(11q23)
- **BCR/ABL1 dual color, dual fusion probe**
  - t(9;22)
- **CEP 4, CEP 10, CEP 17 (pediatric pre B-ALL)**
  - +4, +10, +17
  - These probes may be ordered separately or as a panel

#### Chronic lymphocytic leukemia - FDA approved
- **CLL 5 probe panel: CEP 12, D13S319, LSI13q34, p53 & ATM**
  - +12, del(13q14.3, del 13q34)
  - del(17p13.1) & del(11q22.3)
FLUORESCENCE IN SITU HYBRIDIZATION (FISH) AVAILABLE FROM TRICORE, CONTINUED

Non-Hodgkin lymphoma

- IgH/MYC, CEP 8 tri-color, dual fusion translocation probe t(8;14) Burkitt lymphoma
- IgH/BCL2 dual color, dual fusion translocation probe t(14;18) Follicular lymphoma
- IgH/CCND1 dual color, dual fusion probe t(11;14) Mantle cell lymphoma
- MYC dual color break apart probe 8q24 MYC
- BCL2 dual color break apart probe 18q21 FL
- BCL6 dual color break apart probe 3q27 DLCL

Multiple myeloma/plasma cell myeloma

These probes may be ordered separately or as a panel

- IgH/CCND1 dual color, dual fusion probe t(11;14), del(13q14.3, del13q34)
- D13S319/LSI13q34, p53 del(17p13.1)
- IgH/FGFR3 t(4;14)

NEW MM PANEL UNDER CONSTRUCTION:

- TP53/CEP7 del(17p13.1)
- IgH/FGFR3 t(4;14)
- IgH/MAF t(14;16)
- CKS1B +1q21

Sex mismatched bone marrow transplant

CEP X & CEP Y XX/ XY

Solid Tumor FISH Probes

- LSI EWSR1 (22q12) dual color, breakapart probe Ewing sarcoma
- LSI EGFR (7p12)/CEP 7 dual color amplification probe Glioma
- LSI ALK 2p23 dual color, breakapart probe-FDA approved Adenocarcinoma

Paraffin embedded FISH analysis

Probes for t(8;14), t(11;14), t(14;18), MYC, BCL2, BCL6, ALK 2p23, and Ewing sarcoma (EWSR1) can be ordered on formalin-fixed, paraffin embedded, non-decalcified tissue samples. Turn-around time is 2~4 days on cut samples.

Breast Cancer

PathVysion HER-2 FISH analysis on formalin fixed paraffin embedded breast tissue. Average turnaround time is 2~3 days on cut samples.

Lung Cancer

ALK, ROS1, RET, MET FISH analysis on formalin fixed paraffin embedded lung tissue. Average turn-around time is 2~3 days on cut samples.

Glioma

EGFR, 1p36, 19q13 FISH analysis on formalin fixed paraffin embedded brain tissue. Average turn-around time is 2~3 days on cut samples.
**UroVysion Bladder Cancer**

UroVysion FISH analysis for CEP3/CEP7/CEP17 and 9p21 on voided urine. FISH and Cytology require minimum of 60 mL in lab provided collection kit. Average turnaround time is 3~4 days.

**Prenatal FISH Analysis**

Recommend minimum of 15~18ml of amniotic fluid for FISH & routine chromosome analysis.

Prenatal Aneuploid Test (PAT)  
X, Y, 13, 18 & 21

**Constitutional Abnormalities**

Routine chromosome analysis and specific probe for clinically indicated syndrome would be run concurrently. Average turnaround time for FISH analysis on metaphases is 2 days for aneuploidy analysis, 3~4 days for microdeletion metaphase analysis. STAT aneuploid FISH for 13, 18, 21 or X&Y is 24 hours. Sodium heparin peripheral blood sample is required.

**Aneuploidy FISH analysis**

- Trisomy 21 (Down syndrome)
- Trisomy 13 (Patau syndrome)
- Trisomy 18 (Edward syndrome)
- Monosomy X (Turner syndrome)
- CEP X/CEP Y and CEP X/SRY (sex ambiguity, Klinefelter syndrome)

**Microdeletion FISH analysis**

<table>
<thead>
<tr>
<th>Syndrome</th>
<th>Probes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kallmann syndrome</td>
<td>Xp22.3</td>
</tr>
<tr>
<td>DiGeorge syndrome</td>
<td>22q11.2</td>
</tr>
<tr>
<td>Prader-Willi/Angelman syndrome</td>
<td>15q11-q13</td>
</tr>
<tr>
<td>Smith-Magenis syndrome</td>
<td>17p13.3</td>
</tr>
<tr>
<td>Williams syndrome</td>
<td>7q11.23</td>
</tr>
<tr>
<td>Cri-du-Chat syndrome</td>
<td>5p15.2</td>
</tr>
<tr>
<td>1p36 syndrome</td>
<td>1p36</td>
</tr>
<tr>
<td>Wolf-Hirschhorn syndrome</td>
<td>4p16.3</td>
</tr>
<tr>
<td>Subtelomere panel</td>
<td>all telomeres</td>
</tr>
</tbody>
</table>

*(send out assay)*

**Array CGH (Comparative genomic hybridization)**

Currently this assay is being sent out. Submit one peripheral blood sodium heparin tube and one EDTA tube.

Other probes may be available upon request. For more information, please contact TriCore Cytogenetics at 505-938-8430.