

PATIENT

PATIENT LAST FIRST Male Female Date of Birth Address Home Phone Work Phone Social Security # City State Zip Lab # Hospital #

CLIENT

Referring Physician Authorized Signature Referring Physician Phone/pager NPI # Taxonomy # (NPI Specialty Code) Treating Physician Treating Physician Phone #

SPECIMEN AND CLINICAL INFORMATION

Specimen Information

Hospital status when sample collected: Inpt Outpt Non-hosp ID#(s): Body Site: Collection Date: Time: Send Date: Multiple Specimens: Test All Use Blood as Back-Up Bone Marrow: Green Top(s) Purple Top(s) Core Biopsy Clot Peripheral Blood: Green Top(s) Purple Top(s) Other: Paraffin Block(s) Fresh Tissue: Solid Tumor Lymph Node Fluid: Slides: Smears: Return Material To: Ordering Client Other: Name/Address

Clinical Information

Diagnosis(es)/Clinical Indication ICD9 Select the appropriate ICD9 Codes which apply and/or indicate "Other" as necessary. Anemia 285.9 Refractory Anemia 238.72 Iron Deficiency 280.9 ITP 287.31 Leukocytosis 288.60 Eosinophilia 288.3 Lymphocytosis 288.61 Monocytosis 288.63 Neutrophilia 288.2 Cytopenia 289.9 Leukopenia 288.50 Neutropenia 288.00 Thrombocytopenia 287.5 Polycythemia 289.0 Thrombocytosis 238.71 Acute Leukemia: AML 205.00 ALL 204.00 APL (AML-M3) 205.00 Remission AML 205.01 Remission ALL 204.01 Remission APL (AML-M3) 205.01 MPN/CML: CML 205.10 CMML 206.10 Remission CML 205.11 ET 238.71 PV 238.4 CIMF (PMF) 238.76 MPD (NOS) 238.79 Myelodysplastic Syndromes: MDS (NOS) 238.75 PNH 283.2 Aplastic Anemia 284.9 Pancytopenia 284.1 5q-Syndrome 238.74 Lymphoid Neoplasms: CLL 204.10 HCL 202.40 T-LGL 204.80 Lymphoma: Hodgkin 201.90 Non-Hodgkin B-cell 202.80 T-cell 202.10 Other Plasma Cell Neoplasms: MGUS 273.1 PCD 273.9 Multiple Myeloma 203.00 Waldenstroms 273.3 Other: Clinical Data: (attach clinical history and pathology reports) CBC Attached

Clinical Status: New diagnosis Staging Monitoring MRD Post/under therapy Post BMT: Male Donor Female Donor Other

TESTS AND SERVICES

Tests to Be Performed

Bone Marrow Morphology including IHC and special stains if necessary Peripheral Blood Morphology Flow Cytometry Diagnostic Panel (panel selected based on clinical and morphologic data) Other Panels: ZAP 70 ONLY CLL MRD PNH DNA Ploidy Smear submitted for correlation only Interactive Technical Component Flow Cytometry Immunohistochemistry/Special Stains Lymphoma Phenotype Plasma Cell Neoplasms-Multiple Myeloma Lymphoma vs. Reactive Hyperplasia Hodgkin vs. NHL Acute Leukemia/MDS/MPN Lymphoma vs. Carcinoma Special Stains (specify) Cytogenetics Reflex to FISH if cytogenetics is normal FISH (as appropriate for diagnosis) FISH: Specific probe(s) (see back\*)

\*The most current FISH Probe Library is available at www.genzymegenetics.com/fish

Molecular (as appropriate for diagnosis) Disease Specific Test Offering (for a complete list of test offerings, see back) Acute Leukemia PML/RARA: FISH PCR t(8;21): FISH PCR Inv(16): FISH PCR Myeloproliferative Neoplasms (MPN)/CML FISH for BCR/ABL only Quantitative BCR/ABL by RT-PCR Abl Kinase Domain Mutation JAK2 V617F Mutation Lymphoid Neoplasms FISH Prognostic Profile for CLL 17p (p53) FISH p53 Mutation IGTVH Mutation PCR for B-cell clonality PCR for T-cell clonality Multiple Myeloma clg FISH Prognostic Profile (FISH analysis on selected plasma cells) [Clg-FISH] As appropriate for MM, SMM and MGUS; plasma cell population >5% clg Probes: t(4;14) t(11;14) t(14;16) del(17p) del(13) 1q21 Conventional FISH Profile for Multiple Myeloma [FISH-ONCO-HP]

Consultative Services

Technical component (antibody stain) only IHC staining with brief summary interpretation Pathology consultation and report with IHC analysis Pathology consultation and report on referred slides

BILLING INFORMATION

BC/BS HMO PPO Indemnity Network Medicaid Medicare Medical Group/IPA Hospital/Facility Bill # Self-Pay Billing Information Attached (Please include a copy of insurance card or face sheet.) \*Do not attach credit card information to this form. Insurance Company Name Policy # Group # Relation to Insured: Self Spouse Child Other Patient Signature

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Non-Medicare Patients: I hereby authorize Genzyme Genetics to furnish my designated insurance carrier the information on this form if necessary for reimbursement. I also authorize benefits to be payable to Genzyme Genetics. I understand that I am responsible for any amounts not paid by insurance for reasons including, but not limited to, non-covered and non-authorized services. I permit a copy of this authorization to be used in place of the original.

## CANCER FISH PROBES & PROFILES

Probes in bold type detect the most common abnormalities or abnormalities with diagnostic/prognostic significance in the disease groups listed. All the probes listed below may be ordered individually or as a profile based on medical necessity.

Probes listed in bold type represent standard profiles for each disease group and will be performed if "FISH (as appropriate for diagnosis)" is ordered. Probes in plain type may also be ordered to further characterize the diseases or detect additional abnormalities. FISH probes can be ordered either individually, in combination or in conjunction with conventional cytogenetics (karyotyping). Only those probes marked with a † can be performed on fixed paraffin embedded tissue.

THIS PAGE IS FOR REFERENCE ONLY. PLEASE USE THE FRONT OF THIS FORM TO ORDER TESTING.

### **HEMATOLOGIC FISH PROBES & PROFILES**

#### **Acute Myelogenous Leukemia (AML)**

**Deletion 20q [D20S108]**  
**Monosomy 7/deletion 7q [7cen/D7S522]**  
**Monosomy 5/deletion 5q [5p/EGR1]**  
**Trisomy 8**  
**MLL 11q23**  
 Translocation 8;21 [(RUNX1)ETO/AML1]  
 Translocation 9;22 [BCR/ABL]  
 Inversion/Translocation 16 [CBFB]  
 Translocation 15;17 [PML/RARA]  
 RARA 17q21/t(15;17), t(11;17), t(5;17)

#### **Acute Lymphocytic Leukemia (ALL)**

**Translocation 9;22 [BCR/ABL]**  
**Trisomy 6, Trisomy 21 (adult)**  
**MLL 11q23**  
**Translocation 12;21 [TEL/AML1] (pediatric)**  
**Trisomy 4, Trisomy 10, Trisomy 17 (pediatric)**  
 Deletion 9p [P16]  
 IGH-BA [IGH5'/IGH3'] 14q32.3  
 MYC-BA† 8q24, t(2;8), t(8;14), t(8;22)  
 MYC/IGH† t(8;14)

#### **Myelodysplastic Syndromes (MDS)**

**Deletion 20q [D20S108]**  
**Monosomy 7/deletion 7q [7cen/D7S522]**  
**Monosomy 5/deletion 5q [5p/EGR1]**  
**Trisomy 8**  
 MLL 11q23  
 Deletion 17p [TP53]

#### **Chronic Myelogenous Leukemia (CML)**

**Translocation 9;22 [BCR/ABL]**

#### **Myeloproliferative Neoplasms (MPN)**

**Translocation 9;22 [BCR/ABL]**  
**Deletion 13q [D13S319]**  
**Deletion 20q [D20S108]**  
**Trisomy 8**  
**Trisomy 9**  
 Monosomy 7/deletion 7q [7cen/D7S522]  
 Monosomy 5/deletion 5q [5p/EGR1]  
 FIP1L1-PDGFRa (CHIC2) 4q12 del

#### **Chronic Lymphocytic Leukemia (CLL)**

**Deletion 11q [ATM]**  
**Translocation 11;14 [CCND1/IGH]†**  
**Deletion 17p [TP53]**  
**Trisomy 12**  
**Deletion/Monosomy 13 [D13S319/LAMP1]**  
 IGH-BA [IGH5'/IGH3'] 14q32.3

#### **Non-Hodgkin Lymphoma (NHL)**

**BCL6†**  
**Translocation 11;14 [CCND1/IGH]†**  
**Translocation 14;18 [IGH/BCL2]†**  
**MYC-BA† t(2;8), t(8;14), t(8;22)**  
**Trisomy 12**  
 Translocation 2;5 [NPM/ALK†] (ALCL)  
 IGH-BA (IGH5'/IGH3') 14q32.3  
 MALT1† (marginal zone lymphoma of MALT type)  
 Translocation 8;14 [MYC/IGH]†  
 TCR alpha/delta 14q11.2

#### **Mantle Cell Lymphoma**

**Translocation 11;14 [CCND1/IGH]†**

#### **Follicular Lymphoma**

**Translocation 14;18 [IGH/BCL2]†**

#### **Burkitt's Lymphoma**

**MYC-BA† t(2;8), t(8;14), t(8;22)**  
**Translocation 8;14 [MYC/IGH]†**

#### **MALT Lymphoma**

**MALT1† 18q21/t(11;18),t(14;18)**

#### **Anaplastic Large Cell Lymphoma**

**ALK† 2p23/t(2;5) or variants**

#### **Multiple Myeloma/Plasma Cell Neoplasms**

Note: cIg staining, when ordered, will be performed on confirmed cases of MM, SMM and MGUS.

**Translocation 11;14 [CCND1/IGH]†**

**Translocation 4;14 [FGFR3/IGH]**

**Translocation 14;16 [IGH/MAF]**

**Deletion 13q [RB1/D13S319]**

**Deletion 17p [TP53]**

**Gain 1q21**

**Trisomy 3**

IGH-BA [IGH5'/IGH3'] 14q32.3

Trisomy 7/Trisomy 9/Trisomy 11

#### **Transplant Monitoring**

**XX/XY for sex-mismatched transplant**

#### **SOLID TUMOR FISH PROBES & PROFILES**

##### **Bladder Cancer Profile (UroVysion®)**

del(9)(p21) [LSI p16], +3 [CEP 3], +7 [CEP 7], +17 [CEP 17]

##### **Breast Cancer**

HER2/17cen 17q11.2-q12 amplification\*

##### **Colorectal Cancer**

EGFR/7cen 7p12 amplification

##### **Ewing's Sarcoma**

EWSR1 22q12

##### **Neuroblastoma**

NMYC 2p24.1 amplification

##### **Non-Small Cell Lung Carcinoma (NSCLC)**

ALK inv(2)(p21p23)  
 EGFR/7cen 7p12 amplification

##### **Oligodendroglioma**

1p/19q deletions 1p/1q, 19p/19q

##### **Synovial Sarcoma**

SYT 18q11.2

UroVysion® is a registered trademark of Abbott Laboratories.

\*PathVysion® is a registered trademark of Vysis, Inc., a wholly-owned subsidiary of Abbott Laboratories.

## MOLECULAR GENETICS BY PCR

Call Genzyme at (800) 447-5816 or visit [www.genzymegenetics.com](http://www.genzymegenetics.com) for a complete listing.

#### **Acute Leukemia**

##### **Acute Myelogenous Leukemia (AML)**

Inversion 16  
 Translocation 8;21 [(RUNX1) ETO/AML1]  
 Translocation 9;22 (BCR/ABL MBR and mbr)

##### **Acute Lymphocytic Leukemia (ALL)**

Translocation 9;22 (BCR/ABL MBR and mbr)

##### **Acute Promyelocytic Leukemia**

Translocation 15;17 (PML/RARA)

##### **Chronic Myeloid Leukemia (CML)**

Translocation 9;22 (BCR/ABL MBR and mbr) real-time reverse transcriptase quantitative PCR (RQ-PCR)  
 ABL Kinase Mutation Analysis

#### **Non-Hodgkin Lymphoma (NHL)**

B-cell immunoglobulin heavy chain gene rearrangement (IGH)  
 T-cell receptor gamma gene rearrangement (TCR gamma)  
 Translocation 14;18 (IGH/BCL2) for follicular lymphoma

#### **Myeloproliferative Neoplasm (MPN)**

JAK2 V617F Mutation Analysis

#### **Chronic Lymphocytic Leukemia (CLL)**

IGHV Hypermutation Analysis  
 p53 Mutation Analysis

### Specimen Requirements for Hematopathology Testing

Technology	Blood	Bone Marrow	Technology	Blood	Bone Marrow
FLOW	5-10ml Green Top tube	2-3ml Green Top tube	FISH	5-10ml Green Top tube	2-3ml Green Top tube
FLOW MRD	5-10ml Green Top tube	5-10ml Green Top tube	Molecular PCR	5-10ml Lavender Top tube	2-3ml Lavender Top tube
Cytogenetics	5-10ml Green Top tube	2-3ml Green Top tube			