

UK NEQAS

Leucocyte Immunophenotyping

Title: Leukaemia Diagnostic Table

Index: Flow 449

Authors: Alison Whitby and Charlotte Wynn

Version: 2.4

Authorised By: Matthew Fletcher

Authorisation Date: 15-May-2019

Review Date: 15-May-2021

Location Of Copy: unknown

Uncontrolled Copy

Myeloproliferative Neoplasms	Myeloproliferative Neoplasms	<ul style="list-style-type: none"> Chronic myeloid leukaemia, <i>BCR-ABL1</i> positive Chronic neutrophilic leukaemia Polycythaemia vera Primary myelofibrosis Essential thrombocythaemia Chronic eosinophilic leukaemia, NOS Myeloproliferative neoplasm, unclassifiable
	Mastocytosis	<ul style="list-style-type: none"> Cutaneous mastocytosis Indolent systemic mastocytosis Systemic mastocytosis with an associated haematological neoplasm Aggressive systemic mastocytosis Mast cell leukaemia Mast cell sarcoma
	Myeloid/lymphoid neoplasms with eosinophilia and gene rearrangement	<ul style="list-style-type: none"> Myeloid/lymphoid neoplasms with <i>PDGFRA</i> rearrangement Myeloid/lymphoid neoplasms with <i>PDGFRB</i> rearrangement Myeloid/lymphoid neoplasms with <i>FGFR1</i> rearrangement Myeloid/lymphoid neoplasms with <i>PCM1-JAK2</i>
	Myelodysplastic syndromes	<ul style="list-style-type: none"> Myelodysplastic syndrome with single lineage dysplasia Myelodysplastic syndrome with ring sideroblasts and single lineage dysplasia Myelodysplastic syndrome with ring sideroblasts and multilineage dysplasia Myelodysplastic syndrome with multilineage dysplasia Myelodysplastic syndrome with excess blasts Myelodysplastic syndrome, unclassifiable Myelodysplastic syndrome with isolated del(5q) Refractory cytopenia of childhood
	Myeloid neoplasms with germ line predisposition	<ul style="list-style-type: none"> Acute myeloid leukaemia with germline <i>CEBPA</i> mutation Myeloid neoplasms with germline <i>DDX41</i> mutation Myeloid neoplasms with germline <i>RUNX1</i> mutation Myeloid neoplasms with germline <i>ANKRD26</i> mutation Myeloid neoplasms with germline <i>ETV6</i> mutation Myeloid neoplasms with germline <i>GATA2</i> mutation
	Myelodysplastic/myeloproliferative neoplasms	<ul style="list-style-type: none"> Chronic myelomonocytic leukaemia Atypical chronic myeloid leukaemia, <i>BCR-ABL1</i> negative Juvenile myelomonocytic leukaemia Myelodysplastic/myeloproliferative neoplasm, unclassifiable Myelodysplastic/myeloproliferative neoplasm with ring sideroblasts and thrombocytosis
	Acute myeloid leukaemia (AML) and related precursor neoplasms	<p>AML with recurrent genetic abnormalities</p> <ul style="list-style-type: none"> AML with t(8;21)(q22;q22.1); <i>RUNX1-RUNX1T1</i> AML with inv(16)(p13.1q22) or t(16;16)(p13.1;q22); <i>CBFB-MYH11</i> Acute promyelocytic leukaemia with <i>PML-RARA</i> AML with t(9;11)(p21.3;q23.3); <i>KMT2A-MLL3</i> AML with t(6;9)(p23;q34.1); <i>DEK-NUP214</i> AML with inv(3)(q21.3q26.2) or t(3;3)(q21.3;q26.2); <i>GATA2, MECOM</i> AML (megakaryoblastic) with t(1;22)(p13.3;q13.1); <i>RBM15-MKL1</i> AML with <i>BCR-ABL1</i> AML with biallelic mutations of <i>CEBPA</i> AML with mutated <i>NPM1</i> AML with mutated <i>RUNX1</i>

	AML with myelodysplasia-related changes	<ul style="list-style-type: none"> • AML with myelodysplasia-related changes
	Therapy-related myeloid neoplasms	<ul style="list-style-type: none"> • Therapy-related myeloid neoplasms
	Acute Myeloid leukaemia, NOS	<ul style="list-style-type: none"> • AML with minimal differentiation • AML without maturation • AML with maturation • Acute myelomonocytic leukaemia • Acute monoblastic and monocytic leukaemia • Pure erythroid leukaemia • Acute megakaryoblastic leukaemia • Acute basophilic leukaemia • Acute panmyelosis with myelofibrosis
	Myeloid sarcoma	<ul style="list-style-type: none"> • Myeloid sarcoma
	Myeloid proliferations related to Down syndrome	<ul style="list-style-type: none"> • Transient abnormal myelopoiesis associated with Down syndrome • Myeloid leukaemia associated with Down syndrome
	Blastic plasmacytoid dendritic cell neoplasm	<ul style="list-style-type: none"> • Blastic plasmacytoid dendritic cell neoplasm
	Acute leukaemias of ambiguous lineage	<ul style="list-style-type: none"> • Mixed phenotype acute leukaemia with t(9;22)(q34.1;q11.2); <i>BCR-ABL1</i> • Acute undifferentiated leukaemia • Mixed phenotype acute leukaemia with t(v;11q23.3); <i>KMT2A</i> rearranged • Mixed phenotype acute leukaemia, T/myeloid, NOS • Mixed phenotype acute leukaemia, B/myeloid, NOS • Mixed-phenotype acute leukaemia, NOS, rare types • Acute leukaemias of ambiguous lineage, NOS

Lymphoid B-cell

	Precursor B-cell lymphoid neoplasms	<ul style="list-style-type: none"> • B lymphoblastic leukaemia/lymphoma, NOS • B lymphoblastic leukaemia/lymphoma with t(v;11q23.3); <i>KMT2A</i>-rearranged • B Lymphoblastic leukaemia/lymphoma with t(9;22)(q34.1;q11.2); <i>BCR-ABL1</i> • B lymphoblastic leukaemia/lymphoma with t(12;21)(p13.2;q22.1); <i>ETV6-RUNX1</i> • B lymphoblastic leukaemia/lymphoma with hyperdiploidy • B lymphoblastic leukaemia/lymphoma with hypodiploidy (hypodiploid ALL) • B lymphoblastic leukaemia/lymphoma with t(1;19)(q23;p13.3); <i>TCF3-PBX1</i> • B lymphoblastic leukaemia/lymphoma with t(5;14)(q31.1;q32.1); <i>IL3-IGH</i> • B lymphoblastic leukaemia/lymphoma, <i>BCR-ABL1</i>-like • B lymphoblastic leukaemia/lymphoma with <i>iAMP21</i>
	Mature B-cell neoplasms	<ul style="list-style-type: none"> • Chronic lymphocytic leukaemia (CLL)/small lymphocytic lymphoma • Monoclonal B-cell lymphocytosis, CLL-type • Monoclonal B-cell lymphocytosis, non CLL-type • B-cell prolymphocytic leukaemia • Splenic marginal zone lymphoma • Splenic diffuse red pulp small B-cell lymphoma • Hairy cell leukaemia • Hairy cell leukaemia-variant • Splenic B-cell lymphoma/leukaemia, unclassifiable • Lymphoplasmacytic lymphoma • Waldenström macroglobulinaemia • IgM monoclonal gammopathy of undetermined significance • Non-IgM monoclonal gammopathy of undetermined significance • Alpha heavy chain disease • Gamma heavy chain disease • Mu heavy chain disease • Plasma cell myeloma • Smouldering (asymptomatic) plasma cell myeloma • Non-secretory myeloma • Plasma cell leukaemia • Solitary plasmacytoma of bone • Extraosseous plasmacytoma • Primary amyloidosis • Light chain and heavy chain desposition diseases • Extranodal marginal zone lymphoma of mucosa-associated lymphoid tissue (MALT lymphoma) • Nodal marginal zone lymphoma • Follicular lymphoma • Primary cutaneous follicle centre lymphoma • Testicular follicular lymphoma • In situ follicular neoplasia • Duodenal-type follicular lymphoma • Paediatric-type follicular lymphoma • Large B-cell lymphoma with <i>IRF4</i> rearrangement • Mantle cell lymphoma • In situ mantle cell neoplasia • Diffuse large B-cell lymphoma (DLBCL), NOS • Germinal centre B-cell subtype • Activated B-cell subtype • T-cell/histiocyte rich large B-cell lymphoma • Primary DLBCL of the CNS • Primary cutaneous DLBCL, leg type • EBV-positive DLBCL, NOS • EBV-positive mucocutaneous ulcer • DLBCL associated with chronic inflammation • Fibrin-associated diffuse large B-cell lymphoma • Lymphomatoid granulomatosis, grade 1,2

		<ul style="list-style-type: none"> • Lymphomatoid granulomatosis, grade 3 • Primary mediastinal (thymic) large B-cell lymphoma • Intravascular large B-cell lymphoma • ALK-positive large B-cell lymphoma • Plasmablastic lymphoma • Primary effusion lymphoma • Mutlicentric Castleman disease • <i>HHV8</i>-positive DLBCL, NOS • <i>HHV8</i>-positive germinotropic lymphoproliferative disorder • Burkitt lymphoma • Burkitt-like lymphoma with 11q aberration • High-grade B-cell lymphoma, with <i>MYC</i> and <i>BCL2</i> and/or <i>BCL6</i> rearrangements • High-grade B-cell lymphoma, NOS • B-cell lymphoma, unclassifiable, with features intermediate between DLBCL and classic Hodgkin lymphoma
	Hodgkin lymphoma	<ul style="list-style-type: none"> • Nodular lymphocyte predominant Hodgkin lymphoma • Nodular sclerosis classic Hodgkin lymphoma • Mixed-cellularity classic Hodgkin lymphoma • Lymphocyte-rich classic Hodgkin lymphoma • Lymphocyte depleted classic Hodgkin lymphoma

<p>Lymphoid T-cell</p>	Mature T-cell and NK-cell neoplasms	<ul style="list-style-type: none"> • T-cell prolymphocytic leukaemia • Chronic lymphoproliferative disorder NK-cells • T-cell large granular lymphocytic leukaemia • Aggressive NK cell leukaemia • Systemic EBV positive T-cell lymphoma of childhood • Chronic active EBV infection of T- and NK-cell type, systemic form • Severe mosquito bite allergy • Hydroa vacciniforme-like lymphoproliferative disorder • Adult T-cell leukaemia/lymphoma • Extranodal NK/T cell lymphoma, nasal type • Enteropathy-associated T-cell lymphoma • Monomorphic epitheliotropic intestinal T-cell lymphoma • Intestinal T-cell lymphoma, NOS • Indolent T-cell lymphoproliferative disorder of the gastrointestinal tract • Hepatosplenic T-cell lymphoma • Subcutaneous panniculitis-like T-cell lymphoma • Mycosis fungoides • Sézary syndrome • Primary cutaneous CD30-positive T-cell lymphoproliferative disorders • Lymphomatoid papulosis • Primary cutaneous anaplastic large cell lymphoma • Primary cutaneous gamma-delta T-cell lymphoma • Primary cutaneous CD8-positive aggressive epidermotropic cytotoxic T-cell lymphoma • Primary cutaneous acral CD8-positive T-cell lymphoma • Primary cutaneous CD4+ small/medium T-cell lymphoproliferative disorder • Peripheral T-cell lymphoma, NOS • Angioimmunoblastic T-cell lymphoma • Anaplastic large cell lymphoma, ALK positive • Anaplastic large cell lymphoma, ALK negative • Follicular T-cell lymphoma • Nodal peripheral T-cell lymphoma with T follicular helper phenotype • Breast implant-associated anaplastic large-cell lymphoma
-------------------------------	-------------------------------------	--

	Precursor T-cell and NK-cell neoplasms	<ul style="list-style-type: none"> • T-lymphoblastic leukaemia/lymphoma • Early T-cell precursor lymphoblastic leukaemia • NK – lymphoblastic leukaemia/lymphoma
Histiocytic and Dendritic Cell Neoplasms	Histiocytic and Dendritic Cell Neoplasms	<ul style="list-style-type: none"> • Histiocytic sarcoma • Langerhans cell histiocytosis, NOS • Langerhans cell histiocytosis, monostotic • Langerhans cell histiocytosis, polystotic • Langerhans cell histiocytosis, disseminated • Langerhans cell sarcoma • Indeterminate dendritic cell tumour • Interdigitating dendritic cell sarcoma • Follicular dendritic cell sarcoma • Fibroblastic reticular cell tumour • Disseminated juvenile xanthogranuloma • Erdheim-Chester disease
Immunodeficiency-associated lymphoproliferative disorders	Immunodeficiency-associated lymphoproliferative disorders	<ul style="list-style-type: none"> • Post-transplant lymphoproliferative disorders (PTLD) • Non-destructive PTLD • Polymorphic PTLD • Plasmacytic hyperplasia PTLD • Florid follicular hyperplasia PTLD • Monomorphic PTLD • Classic Hodgkin Lymphoma PTLD • Other iatrogenic immunodeficiency-associated lymphoproliferative disorders