**Cellular pathology audit template**

|  |  |
| --- | --- |
| **Date of completion** | (To be inserted when completed) |
| **Name of lead author/ participants** | (To be inserted) |
| **Specialty** | Dermatopathology |
| **Title** | **An audit of reporting primary cutaneous lymphoma** |
| **Background** | Datasets published by the Royal College of Pathologists define the core data items that are to be included in the histopathology reports of different cancers to ensure that all necessary data is provided.  The *Dataset for Histopathological Reporting of Primary Cutaneous Lymphoma*1 states data items for reporting these tumours. It specifies the core data items that should be included in all reports. |
| **Aim and objectives** | This audit template is a tool to determine whether:   * individual pathologists and/or departments are recording all core data items. |
| **Standards and criteria** | **Criteria range:** 100%, or if not achieved, there is documentation in the case notes that explains the variance.  **The agreed standards:** Each core data item in the dataset is included in histopathology reports (100% compliance). |
| **Method** | **Sample selection:**   * All cases of primary cutaneous lymphoma from a specified time period. * Review of histopathological reports. * Record whether or not data items are included.   **Data to be collected on proforma (see below).**  The audit proforma covers the microscopic features stated in the dataset. It does not include core clinical items which would need a different audit tool. |
| **Results** | (To be completed by the author)  The results of this audit show the following compliance with the standards:   |  |  |  | | --- | --- | --- | |  | | **% compliance** | | WHO lymphoma entity | |  | | Morphology | |  | | SNOMED codes | |  | | Disease specific core data items including immunophenotype +/- EBV status, clonality, genotype: | |  | | Mycosis fungoides | CD2, CD3, CD4, CD5, CD7, CD8, CD20, CD30 |  | | Sezary syndrome | CD2, CD3, CD4, CD5, CD7, CD8, CD20, CD30  Flow cytometry\* |  | | Lymphomatoid papulosis | CD2, CD3, CD4, CD5, CD7, CD8, CD20, CD30, Granzyme B, TIA1, Perforin\*\*, CD25 |  | | Primary cutaneous anaplastic large cell lymphoma | CD2, CD3, CD4, CD5, CD7, CD8, CD20, CD30, Granzyme B, TIA1, Perforin\*\*, CD25 |  | | Cutaneous adult T-cell leukaemia/ lymphoma | CD2, CD3, CD4, CD5, CD7, CD8, CD20, CD30, CD25 |  | | Subcutaneous panniculitis-like T-cell lymphoma | CD2, CD3, CD4, CD5, CD7, CD8, CD20, CD30, αβ, γδ, CD56, EBER(ISH), Granzyme B, TIA1, Perforin\*\* |  | | Hydroa vacciniforme-like lymphoproliferative disorder | CD2, CD3, CD4, CD5, CD7, CD8, CD20, CD30, EBER(ISH), CD56, αβ, γδ, Granzyme B, TIA1, Perforin |  | | Extranodal NK/T-cell lymphoma, nasal type | CD2, CD3, CD4, CD5, CD7, CD8, CD20, CD30, CD56, Granzyme B, TIA1, Perforin\*\*, EBER(ISH) |  | | Primary cutaneous gamma-delta T-cell lymphoma | CD2, CD3, CD4, CD5, CD7, CD8, CD20, CD30, CD56, Granzyme B, TIA1, Perforin\*\*, γδ, EBER(ISH) |  | | Primary cutaneous CD8+ aggressive epidermotrophic cytotoxic T-cell lymphoma | CD2, CD3, CD4, CD5, CD7, CD8, CD20, CD30, Granzyme B, TIA1, Perforin\*\* |  | | Primary cutaneous acral CD8+ T-cell lymphoma | CD2, CD3, CD4, CD5, CD7, CD8, CD20, CD30, TIA1 |  | | Primary cutaneous CD4+ small/medium T-cell lymphoproliferative disorder | CD2, CD3, CD4, CD5, CD7, CD8, CD20, CD30, PD1, ICOS, BCL-6, CXCL13, CD21 |  | | Primary cutaneous marginal zone (MALT) lymphoma | CD20, CD3, BCL-2, CD5, CD10, BCL-6, cyclin-D1, CD21, CD23, light chains (IHC or ISH), IgM, IgD, ki-67, B-cell clonality by PCR |  | | Primary cutaneous follicle centre lymphoma | CD20, CD3, BCL-2, CD5, CD10, BCL-6, cyclin-D1, CD21, CD23, ki-67, light chains |  | | Primary cutaneous diffuse large B-cell lymphoma, leg type | CD20, CD3, BCL-2, CD10, BCL-6, CD21, MUM-1, CD23, ki-67, MYC (IHC) |  | | EBV-positive mucocutaneous ulcer | CD20, CD3, PAX-5, CD30, EBER(ISH), ki-67, CD5, CD15, MUM-1 |  | | Lymphomatoid granulomatosis, grade 1-2 | CD20, CD3, CD30, EBER(ISH), MUM-1, BCL-2, BCL-6, CD10, ki-67 |  | | Lymphomatoid granulomatosis, grade 3 | CD20, CD3, CD30, EBER(ISH), MUM-1, BCL-2, BCL-6, CD10, ki-67, MYC |  | | Blastic plasmacytoid dendritic cell neoplasm | CD20, CD2, CD3, CD4, CD56, CD123, CD30, ki-67, CD5, EBER(ISH), CD8, TIA1, CD34, CD33, MPO, CD117, TdT |  | | Mast cell sarcoma | CD117 (or other mast cell markers e.g. tryptase), CD25, CD2, CD3, CD20 |  | | Indolent systemic mastocytosis | CD117 (or other mast cell markers e.g. tryptase) |  | | Aggressive systemic mastocytosis | CD117 (or other mast cell markers e.g. tryptase) |  | | Systemic mastocytosis with an associated haematological neoplasm | CD117 (or other mast cell markers e.g. tryptase) |  | | Mast cell leukaemia | CD117 (or other mast cell markers e.g. tryptase) |  |   (\*) Items usually not interrogated on tissue sections and therefore this is option to include in the audit.  (\*\*) 2 cytotoxic markers are adequate.  **Commentary:** Please note that for the disease specific core data items, one needs to measure compliance with each core data item individually. |
| **Conclusion** | (To be completed by the author) |
| **Recommend- ations for improvement** | Present the result with recommendations, actions and responsibilities for action and a timescale for implementation. Assign a person(s) responsible to do the work within a timeframe.  **Some suggestions:**   * highlight areas of practice that are different * present findings. |
| **Action plan** | (To be completed by the author – see attached action plan proforma) |
| **Re-audit date** | (To be completed by the author) |
| **Reference** | 1. Calonje E, Alexander S. *Dataset for Histopathological Reporting of Primary Cutaneous Lymphoma.* London, UK: The Royal College of Pathologists, 2023.   [www.rcpath.org/profession/guidelines/cancer-datasets-and-tissue-pathways.html](http://www.rcpath.org/profession/guidelines/cancer-datasets-and-tissue-pathways.html) |

**Data collection proforma for primary cutaneous lymphoma**

**Audit reviewing practice**

Patient name:

Hospital number:

Date of birth:

Consultant:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | **1**  **Yes** | **2**  **No** | **3** If **No**, was there documentation to explain the variance?  **Yes/No plus free-text comment** | **4** Compliant with guideline based on **Yes** from column 1 or an appropriate explanation from column 3. **Yes/No** |
| **Core data items** | | | | | |
| WHO lymphoma entity | |  |  |  |  |
| Morphology | |  |  |  |  |
| SNOMED codes | |  |  |  |  |
| **Disease specific core data items including immunophenotype +/- EBV status, clonality, genotype:** | |  |  |  |  |
| Mycosis fungoides | CD2, CD3, CD4, CD5, CD7, CD8, CD20, CD30 |  |  |  |  |
| Sezary syndrome | CD2, CD3, CD4, CD5, CD7, CD8, CD20, CD30  Flow cytometry\* |  |  |  |  |
| Lymphomatoid papulosis | CD2, CD3, CD4, CD5, CD7, CD8, CD20, CD30, Granzyme B, TIA1, Perforin\*\*, CD25 |  |  |  |  |
| Primary cutaneous anaplastic large cell lymphoma | CD2, CD3, CD4, CD5, CD7, CD8, CD20, CD30, Granzyme B, TIA1, Perforin\*\*, CD25 |  |  |  |  |
| Cutaneous adult T-cell leukaemia/ lymphoma | CD2, CD3, CD4, CD5, CD7, CD8, CD20, CD30, CD25 |  |  |  |  |
| Subcutaneous panniculitis-like T-cell lymphoma | CD2, CD3, CD4, CD5, CD7, CD8, CD20, CD30, αβ, γδ, CD56, EBER(ISH), Granzyme B, TIA1, Perforin\*\* |  |  |  |  |
| Hydroa vacciniforme-like lymphoproliferative disorder | CD2, CD3, CD4, CD5, CD7, CD8, CD20, CD30, EBER(ISH), CD56, αβ, γδ, Granzyme B, TIA1, Perforin |  |  |  |  |
| Extranodal NK/T-cell lymphoma, nasal type | CD2, CD3, CD4, CD5, CD7, CD8, CD20, CD30, CD56, Granzyme B, TIA1, Perforin\*\*, EBER(ISH) |  |  |  |  |
| Primary cutaneous gamma-delta T-cell lymphoma | CD2, CD3, CD4, CD5, CD7, CD8, CD20, CD30, CD56, Granzyme B, TIA1, Perforin\*\*, γδ, EBER(ISH) |  |  |  |  |
| Primary cutaneous CD8+ aggressive epidermotrophic cytotoxic T-cell lymphoma | CD2, CD3, CD4, CD5, CD7, CD8, CD20, CD30, Granzyme B, TIA1, Perforin\*\* |  |  |  |  |
| Primary cutaneous acral CD8+ T-cell lymphoma | CD2, CD3, CD4, CD5, CD7, CD8, CD20, CD30, TIA1 |  |  |  |  |
| Primary cutaneous CD4+ small/medium T-cell lymphoproliferative disorder | CD2, CD3, CD4, CD5, CD7, CD8, CD20, CD30, PD1, ICOS, BCL-6, CXCL13, CD21 |  |  |  |  |
| Primary cutaneous marginal zone (MALT) lymphoma | CD20, CD3, BCL-2, CD5, CD10, BCL-6, cyclin-D1, CD21, CD23, light chains (IHC or ISH), IgM, IgD, ki-67, B-cell clonality by PCR |  |  |  |  |
| Primary cutaneous follicle centre lymphoma | CD20, CD3, BCL-2, CD5, CD10, BCL-6, cyclin-D1, CD21, CD23, ki-67, light chains |  |  |  |  |
| Primary cutaneous diffuse large B-cell lymphoma, leg type | CD20, CD3, BCL-2, CD10, BCL-6, CD21, MUM-1, CD23, ki-67, MYC (IHC) |  |  |  |  |
| EBV-positive mucocutaneous ulcer | CD20, CD3, PAX-5, CD30, EBER(ISH), ki-67, CD5, CD15, MUM-1 |  |  |  |  |
| Lymphomatoid granulomatosis, grade 1–2 | CD20, CD3, CD30, EBER(ISH), MUM-1, BCL-2, BCL-6, CD10, ki-67 |  |  |  |  |
| Lymphomatoid granulomatosis, grade 3 | CD20, CD3, CD30, EBER(ISH), MUM-1, BCL-2, BCL-6, CD10, ki-67, MYC |  |  |  |  |
| Blastic plasmacytoid dendritic cell neoplasm | CD20, CD2, CD3, CD4, CD56, CD123, CD30, ki-67, CD5, EBER(ISH), CD8, TIA1, CD34, CD33, MPO, CD117, TdT |  |  |  |  |
| Mast cell sarcoma | CD117 (or other mast cell markers e.g. tryptase), CD25, CD2, CD3, CD20 |  |  |  |  |
| Indolent systemic mastocytosis | CD117 (or other mast cell markers e.g. tryptase) |  |  |  |  |
| Aggressive systemic mastocytosis | CD117 (or other mast cell markers e.g. tryptase) |  |  |  |  |
| Systemic mastocytosis with an associated haematological neoplasm | CD117 (or other mast cell markers e.g. tryptase) |  |  |  |  |
| Mast cell leukaemia | CD117 (or other mast cell markers e.g. tryptase) |  |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Audit action plan**  An audit of reporting primary cutaneous lymphoma | | | | | | |
| **Audit recommendation** | **Objective** | **Action** | **Timescale** | **Barriers and constraints** | **Outcome** | **Monitoring** |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |