

Bone Marrow Specimen (Aspirate and Trephine Biopsy) Proforma



Mandatory questions (i.e. protocol standards) are in bold (e.g. **S1.03**).

Family name

Given name(s)

Date of birth

Patient identifiers

e.g. MRN, IHI or NHI (please indicate which)

Date of request

S1.03 Accession number

Requesting doctor - name and contact details

Sex

- Male
 Female
 Intersex/indeterminate

Ethnicity

- Unknown
 Aboriginal/Torres Strait Islander
 Other ethnicity:

Clinical details

Indication

Clinical history

Relevant results

Test requested

S1.04 Principal clinician caring for the patient and contact details

G1.01 Other clinical information received

Record of procedure

S2.01 Date of the BM specimen collection

S2.02 BM Biopsy performed by

OR Not known

S2.03 Anatomical site of the aspirate/biopsy (include side)

G2.01 Ease/difficulty of the aspiration

G2.02 Sedation

S2.04 Specimen type(s)

- Peripheral blood smear
- Aspirate - smear
- Aspirate - squash prep
- Trepine biopsy
- Trepine imprint

S2.05 Distribution of biopsy material/ additional tests requested

- Flow cytometry
- Immunohistochemistry
- Cytogenetics
- FISH
- Molecular studies
- Microbiology
- Tissue banking
- Other (specify)

G2.03 Additional comments

S2.06 BLOOD COUNT RESULTS

Date of last FBC

FBC results

Hb g/L

WCC X 10⁹/L

MCV fL

NEU X 10⁹/L

LYM X 10⁹/L

MON X 10⁹/L

EOS X 10⁹/L

BAS X 10⁹/L

Other (specify)

PLT X 10⁹/L

Blood film results

Morphological findings - ASPIRATE

S3.01 Cellularity of particles

- Acellular
- Hypocellular: Reduced with regard to the patient's age
- Normocellular: Normal for the patient's age
- Hypercellular: Increased with regard to the patient's age

OR **Dry Tap**

OR **Blood Tap**

OR **Haemodilute marrow sample**

AND (if applicable)

Scant particles for assessment

Degree (If particles hypocellular/hypercellular)

- Mildly
- Moderately
- Markedly

Cellularity of trails (if different to particles)

- Acellular
- Hypocellular: Reduced with regard to the patient's age
- Normocellular: Normal for the patient's age
- Hypercellular: Increased with regard to the patient's age

OR **Dry Tap**

OR **Blood Tap**

OR **Haemodilute marrow sample**

AND (if applicable)

Scant particles for assessment

Degree (If trails hypocellular, or hypercellular)

- Mildly
- Moderately
- Markedly

Cellularity of imprint (if required)

- Acellular
- Hypocellular: Reduced with regard to the patient's age
- Normocellular: Normal for the patient's age
- Hypercellular: Increased with regard to the patient's age

OR **Dry Tap**

OR **Blood Tap**

OR **Haemodilute marrow sample**

Degree (If imprint hypocellular/hypercellular)

- Mildly
- Moderately
- Markedly

S3.02 Nucleated differential cell count

Inadequate specimen

OR

Total number of nucleated cells counted

AND

List each cell type counted and a numeric value

Cell type	Result

Lymphoid aggregates (if seen)

M:E Ratio

 /

S3.03 ERYTHROPOIESIS

Cellularity

- Absent
- Mildly reduced
- Moderately reduced
- Markedly reduced
- Normal
- Mildly increased
- Moderately increased
- Markedly increased

Type

- Normoblastic
- Megaloblastic (nuclear-cytoplasmic asynchrony)
- Dyserythropoietic (*describe including percentage of abnormal cells*)

Other (*e.g. giant pronormoblast*)(specify)

S3.04 GRANULOPOIESIS

Cellularity

- Absent
- Mildly reduced
- Moderately reduced
- Markedly reduced
- Normal
- Mildly increased
- Moderately increased
- Markedly increased

Maturation

- Left-shifted
- Dysgranulopoietic
- Maturation arrest (stage:)
- Other (specify)

Myeloid morphology (including percentage of abnormal cells)

Normal

OR

If maturation is not normal describe:
Leucocyte subpopulations (including blasts (where relevant), mast cells - a qualitative and quantitative description)

S3.05 MEGAKARYOPOIESIS

Cellularity

- Absent
- Mildly reduced
- Moderately reduced
- Markedly reduced
- Normal
- Mildly increased
- Moderately increased
- Markedly increased

Morphology

- Normal**

OR

- Micromegakaryocytes
- Nuclear hypoblobation
- Multinucleation (widely separated nuclei)
- Other eg pyknotic (specify)

AND

Abnormal megakaryocytes

	%
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Large platelet clumps

- Absent
- Present

S3.06 LYMPHOCYTES

Number

- Reduced
- Normal
- Increased

Morphology (including size and nuclear and cytoplasmic features)

S3.07 PLASMA CELLS

Number

- Normal
- Increased

Morphology (including size and nuclear and cytoplasmic features)

G3.01 Other marrow cells (if required)

- Histiocytes (macrophages)
- Osteoblasts
- Osteoclasts
- Other (specify)

Morphological features (if required)

G3.02 Abnormal infiltrating nonhaematopoietic cells (if present)

G3.03 Haemophagocytosis

- Mild
- Moderate
- Marked

Cell types ingested

S3.08 Iron stores

- Absent
- Reduced
- Normal
- Increased
- Markedly increased

AND/OR

- 0
- 1
- 2
- 3
- 4
- 5
- 6

Sideroblasts (if relevant)

- Absent
- Present

	%
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Morphology (eg coarse/ringed)

S3.09 Other significant features of the aspirate (if required)

S3.10 Other comment on the aspirate (if required)

S3.11 Reporting haematologist / pathologist (aspirate) (include designation)

Date

Morphological findings - TREPINE

S3.12 Trepine biopsy identifier

S3.13 MACROSCOPIC

Number of cores

Aggregate length mm

Adequacy

- Adequate for examination
- Inadequate

Description (if required)

S3.14 Trabecular bone architecture

S3.15 Cellularity

- Acellular
- Hypocellular: Reduced with regard to the patient's age
- Normocellular: Normal for the patient's age
- Hypercellular: Increased with regard to the patient's age

Degree (Optional)

- Mildly
- Moderately
- Markedly

AND/OR %

Architecture

- Normal
- Abnormal
 - Interstitial infiltrate
 - Focal infiltrate
 - Paratrabecular
 - Nonparatrabecular
 - Other (specify)
 - Nodular infiltrate
 - Diffuse infiltrate
 - Distorted due to fibrosis
 - Other (specify)

Areas of abnormality (if present) (e.g. necrosis, amorphous eosinophilic material, serous atrophy, haemorrhage or fibrosis)

- Absent
- Present

Artefactual changes

- Absent
- Present

S3.16 ERYTHROPOIESIS

Number

- Absent
- Mildly reduced
- Moderately reduced
- Markedly reduced
- Normal
- Mildly increased
- Moderately increased
- Markedly increased

Maturation

- Normal

OR

- Left shifted
- Other (specify)

AND if not normal, record

Morphological abnormalities

- Absent
- Present

S3.17 GRANULOPOIESIS

Cellularity

- Absent
- Mildly reduced
- Moderately reduced
- Markedly reduced
- Normal
- Mildly increased
- Moderately increased
- Markedly increased

Maturation

- Normal

OR

- Left-shifted
- Maturation arrest
- Preponderance of immature cells
- Other (specify)

AND if not normal, record

Morphological abnormalities (if required)

Abnormal localisation of immature precursors (if required)

S3.18 MEGAKARYOPOIESIS

Number

- Absent
- Mildly reduced
- Moderately reduced
- Markedly reduced
- Normal
- Mildly increased
- Moderately increased
- Markedly increased

Morphology

Distribution in the marrow (if required eg clusters)

S3.19 LYMPHOCYTES (if required)

Number

- Normal
- Reduced
- Increased

If increased record **Distribution**

- Paratrabecular
- Interstitial
- Nodular
- Diffuse

Size and number lymphoid aggregates (if required)

Morphology (eg size, N:C ratio etc)

S3.20 PLASMA CELLS

- Normal OR

% of nucleated cells

AND if abnormal record,

Morphology (eg immaturity, inclusions)

AND Distribution

Normal

OR

- Interstitial
- Microaggregate (10-50 cells)
- Nodular (>50 cells)
- Diffuse

S3.21 Other cells (if required)

Nonhaematopoietic infiltration (if required)

Granuloma formation (if required)

G3.04 RETICULIN

Grade

For myeloproliferative neoplasms use:

- 0
- 1
- 2
- 3

OR else use:

- Normal
- Mildly increased
- Moderately increased
- Markedly increased

Pattern

- Diffuse
- Focus

G3.05 Other comment on the trephine biopsy

G3.06 (Immuno)histochemical stains

S3.22 Reporting haematologist / pathologist (trephine) (include designation)

Date

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Additional study findings

G4.01 IMMUNOHISTOCHEMISTRY

FLOW CYTOMETRY

CYTOGENETICS

MOLECULAR STUDIES

FISH

MICROBIOLOGY (including staining cultures and PCR)

Additional test result

Synthesis and overview

S5.01 WHO disease subtype

G5.01 Conclusion

S5.02 Reporting haematologist / pathologist (Integrated report)
