About the WMDA donor medical suitability guidelines

Guidance provided by the World Marrow Donor Association (WMDA) aims to provide minimum standards by which potential donors should be assessed. The WMDA guidance reflects the consensus opinion of the WMDA donor medical suitability committee. The purpose of this guidance is to provide globally harmonised medical assessment criteria which simultaneously protect the interest of donors whilst ensuring the safety of cellular products across international boundaries.

Whilst this WMDA guidance is not specifically intended for related donors, those involved with the medical assessment of related donors should consider these recommendations.

How donor medical suitability is assessed

Two key concepts govern the assessment of donor health, namely restrictive criteria for donor risk and more permissive criteria for recipient risk.

Donor risk

- Donation of hematopoietic stem cells (HSC) is an act of altruism, and may be to a recipient in a different country, with quite different moral, cultural and religious values.
- Whilst it is recognised that the process of donation carries a small but unavoidable risk of harm to the donor, it is both the moral and legal responsibility of donor registries and donor centres to minimise any avoidable risk. This includes medical conditions that may increase the risk of harm to the donor before, during, and after the collection of HSC.
- For this reason, medical criteria governing conditions that may increase donor risk are necessarily stringent, and certainly more so than would be the case if the individual were undergoing a procedure for therapeutic benefit.
- In many cases it is difficult to establish a rigorous evidence base as justification for the criteria. In such cases, expert opinion of the underlying physiology of disease will be sought, and combined with knowledge of the known physiological changes associated with donation, as well as experience gained through several decades of HSC donor follow-up and adverse event reporting.
- In general, if there is any doubt about the safety of the donor in the presence of a particular medical condition, it will be recommended that any donor with that condition be prevented from donating.

Recipient risk

- By contrast, our recommendations regarding conditions that may put the recipient at risk are more lenient.
- For many patients, an unrelated donor HSC transplant represents the only possibility of disease cure or long-term remission. Because of the diverse nature of HLA tissue-types, many patients will have a limited number of potentially matched donors. In such cases, donor medical conditions that may present a risk to the recipient alone should be reported to the transplant centre, who are best placed to make an informed risk-benefit judgement on whether to proceed with that particular donor.
- There are obvious exceptions to this, however, in particular the carriage of transmissible agents which may have more deleterious effects in the recipient. These include infectious agents such as HIV, viral hepatitis and HTLV, prion-related diseases such as Creutzfeldt-Jakob Disease, and carriage of auto-reactive lymphocytes causing multi-system or severe single-organ autoimmune diseases, such as systemic lupus erythematosus, multiple sclerosis or inflammatory bowel disease.
Procedure for creating and reviewing the donor medical suitability guidelines

To create and support this resource, the WMDA has established the donor medical suitability committee. Members of the committee represent all major regions in the world, and are themselves overseen by numerous competent authorities within their country of practice. Committee members are actively involved in donor centre and/or registry operations with experience in matters concerning unrelated donor medical suitability. You can find the members here: https://share.wmda.info/x/So1JAQ.

Submitting a request for review

WMDA welcomes requests for review of individual medical conditions from all those with responsibility for HSC donors, related or unrelated. This may be a medical condition not covered by the current guidance, or a request for clarification or review of current guidance. Requests for new guidance, and feedback on existing guidance, are submitted to the donor medical suitability committee. Comments and justifications for the committee decision are documented, including justification for the decision. Regardless of the outcome, a formal response to the query is provided to the author of each submission in order to inform the registry/donor centre of the outcome of the discussion. Recommendations that are approved are posted to this website. Any controversies pertaining to the recommendations are added to the discussion section on the relevant page. You can click on the button on the right top corner of the page.

Add your question or recommendation at the question section or send an email to mail@wmda.info.

WMDA Recommendations for assessing donor medical suitability

Recommended minimum donor medical and lifestyle information requested at recruitment

<table>
<thead>
<tr>
<th>Medical history</th>
<th>Examples of relevant conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cancer</td>
<td></td>
</tr>
<tr>
<td>Autoimmune disease</td>
<td></td>
</tr>
<tr>
<td>Infectious diseases, including being a sexual partner of an infected individual</td>
<td>HIV, Hepatitis B, Hepatitis C, HTLV, syphilis</td>
</tr>
<tr>
<td>Infectious diseases, others</td>
<td>CJD (including familial risk), Chagas disease, tuberculosis, malaria</td>
</tr>
<tr>
<td>Inherited disease</td>
<td>Sickle cell disease, thalassemia, inherited bleeding disorder</td>
</tr>
<tr>
<td>Any other medical history</td>
<td>The potential donor should be asked if they have any other past or current medical problems</td>
</tr>
<tr>
<td>High risk sexual behaviour</td>
<td>As defined by the registry’s national competent authority. However, registries should be aware that sexual practices may change with time and are not necessarily criteria for exclusion.</td>
</tr>
<tr>
<td>Non-prescription parenteral drug use</td>
<td></td>
</tr>
<tr>
<td>Current medications</td>
<td></td>
</tr>
<tr>
<td>Height and weight</td>
<td></td>
</tr>
<tr>
<td>Allergies</td>
<td></td>
</tr>
</tbody>
</table>
Minimum donor medical and lifestyle information requested at confirmatory/verification typing stage

<table>
<thead>
<tr>
<th>Medical history</th>
<th>Examples of relevant conditions or questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cancer</td>
<td>Ankylosing spondylitis; Crohn’s disease; ulcerative colitis; myasthenia gravis; rheumatoid arthritis; sarcoidosis; SLE; multiple sclerosis; scleroderma/CREST; Any other autoimmune condition</td>
</tr>
<tr>
<td>Autoimmune disease</td>
<td>HIV, Hepatitis B, Hepatitis C, HTLV, syphilis</td>
</tr>
<tr>
<td>Infectious diseases, including being a sexual partner of an infected individual</td>
<td>CJD (including familial and exposure risk, e.g. neurosurgery, use of pituitary hormone), Chagas disease, tuberculosis, malaria</td>
</tr>
<tr>
<td>Infectious diseases, others</td>
<td>Any acute or chronic back complaint, including cause, investigations, duration, medication and impact on activities of daily living</td>
</tr>
<tr>
<td>Back problems</td>
<td>Hypertension Most recent blood pressure readings; medications; degree of control</td>
</tr>
<tr>
<td>Cardiac disease</td>
<td>Coronary artery disease; evidence of valve disease, e.g. murmur; arrhythmia</td>
</tr>
<tr>
<td>Asthma</td>
<td>Degree of control; medications; use of oral steroids; hospital admissions; intensive care admissions/ventilation</td>
</tr>
<tr>
<td>Epilepsy</td>
<td>Medications; date of last seizure</td>
</tr>
<tr>
<td>Pregnancy</td>
<td>Number of pregnancies, including miscarriage; current/recent pregnancies; breastfeeding.</td>
</tr>
<tr>
<td>Blood transfusion</td>
<td>Receipt of a blood transfusion. Ask year and place of transfusion.</td>
</tr>
<tr>
<td>Any other medical history</td>
<td>The potential donor should be asked if they have any other past or current medical problems</td>
</tr>
<tr>
<td>Height and weight</td>
<td></td>
</tr>
<tr>
<td>High risk sexual behaviour</td>
<td>As defined by the registry’s national competent authority</td>
</tr>
<tr>
<td>Non-prescription parenteral drug use</td>
<td></td>
</tr>
<tr>
<td>Alcohol consumption</td>
<td></td>
</tr>
<tr>
<td>Tattoo, acupuncture or body piercing</td>
<td>When and where. Establish if at an establishment registered according to national regulations</td>
</tr>
<tr>
<td>Current medications</td>
<td></td>
</tr>
<tr>
<td>Allergies</td>
<td></td>
</tr>
</tbody>
</table>
### Recommended minimum medical assessment at work-up

<table>
<thead>
<tr>
<th>Medical history as table 2, plus:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Travel history</td>
<td>Identify travel to areas with endemic malaria, chagas and West Nile virus</td>
</tr>
<tr>
<td>Sexual history</td>
<td>Identification of high risk sexual behaviour, including within groups associated with a higher prevalence of blood borne viruses</td>
</tr>
<tr>
<td>Examination</td>
<td>General (including height and weight); cardiovascular (including blood pressure); respiratory; gastrointestinal; neurological</td>
</tr>
<tr>
<td>Laboratory investigations (see table 4 for infectious disease markers)</td>
<td></td>
</tr>
<tr>
<td>Haematology</td>
<td>Full blood count; coagulation screen (including PT, APTT and fibrinogen); ESR; blood film; haemoglobin electrophoresis or high-pressure liquid chromatography</td>
</tr>
<tr>
<td>Biochemistry</td>
<td>Urea and electrolytes; liver function tests; LDH; ferritin; random glucose; b-HCG (for females of child-bearing age)</td>
</tr>
<tr>
<td>Other investigations</td>
<td>Chest x-ray; electrocardiogram</td>
</tr>
</tbody>
</table>

### Recommended minimum testing for infectious disease markers

<table>
<thead>
<tr>
<th>Stage</th>
<th>Infectious disease</th>
<th>Recommended validated assay</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recruitment</td>
<td>Nil</td>
<td>Nil</td>
</tr>
<tr>
<td>CT-stage</td>
<td>HIV</td>
<td>HIV antibody</td>
</tr>
<tr>
<td></td>
<td>Hepatitis B</td>
<td>Hepatitis B surface antigen</td>
</tr>
<tr>
<td></td>
<td>Hepatitis C</td>
<td>Hepatitis C antibody</td>
</tr>
<tr>
<td>Work-up</td>
<td>HIV</td>
<td>HIV 1,2 antibody</td>
</tr>
<tr>
<td></td>
<td>p24 antigen</td>
<td></td>
</tr>
<tr>
<td></td>
<td>HIV RNA</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hepatitis B</td>
<td>Hepatitis B surface antigen</td>
</tr>
<tr>
<td></td>
<td>Hepatitis B surface antibody</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hepatitis B core antibody</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hepatitis B DNA</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hepatitis C</td>
<td>Hepatitis C antibody</td>
</tr>
<tr>
<td></td>
<td>Hepatitis C RNA</td>
<td></td>
</tr>
<tr>
<td></td>
<td>HTLV I+II</td>
<td>HTLV I+II antibody</td>
</tr>
<tr>
<td></td>
<td>Syphilis</td>
<td>Validated serological testing algorithm</td>
</tr>
</tbody>
</table>
Schedule for repeating donor assessments in the event of a delay to collection and in case of subsequent donation

<table>
<thead>
<tr>
<th>Time from work-up medical assessment to collection</th>
<th>Repeat assessments required</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;=30 days</td>
<td>None</td>
</tr>
<tr>
<td>&gt;30 days, &lt;90 days</td>
<td>Required:</td>
</tr>
<tr>
<td></td>
<td>• Infectious disease markers</td>
</tr>
<tr>
<td></td>
<td>• Risk assessment(^1) for transmittable disease</td>
</tr>
<tr>
<td></td>
<td>• Full donor history if subsequent donation</td>
</tr>
<tr>
<td>Optional:</td>
<td>• Full donor history if first donation</td>
</tr>
<tr>
<td></td>
<td>• Physical examination</td>
</tr>
<tr>
<td></td>
<td>• All laboratory testing excluding hemoglobinopathy screening</td>
</tr>
<tr>
<td>Additional testing</td>
<td></td>
</tr>
<tr>
<td>&gt;=90 days, &lt;6 months</td>
<td>Required:</td>
</tr>
<tr>
<td></td>
<td>• Infectious disease markers</td>
</tr>
<tr>
<td></td>
<td>• Risk assessment for transmittable disease</td>
</tr>
<tr>
<td></td>
<td>• Full donor history if subsequent donation</td>
</tr>
<tr>
<td></td>
<td>• All laboratory testing excluding hemoglobinopathy screening</td>
</tr>
<tr>
<td>Optional:</td>
<td>• Full donor history if first donation</td>
</tr>
<tr>
<td></td>
<td>• Physical examination</td>
</tr>
<tr>
<td>Additional testing</td>
<td></td>
</tr>
<tr>
<td>&gt;=6 months</td>
<td>Required:</td>
</tr>
<tr>
<td></td>
<td>• Infectious disease markers</td>
</tr>
<tr>
<td></td>
<td>• Full donor history including risk assessment for transmittable disease</td>
</tr>
<tr>
<td></td>
<td>• Physical examination</td>
</tr>
<tr>
<td></td>
<td>• All laboratory testing excluding hemoglobinopathy screening</td>
</tr>
<tr>
<td>Optional (per discretion of physician in charge):</td>
<td>• ECG</td>
</tr>
<tr>
<td>Additional testing</td>
<td>Optional: (per discretion of physician in charge): Additional testing such as Chest X-ray or abdominal ultrasound.</td>
</tr>
</tbody>
</table>

\(^1\) Risk assessment does not necessary mean a full risk questionnaire, but means a risk assessment based on local policies, endemic risks and previous individual risk assessments and/or Infectious disease marker results. Especially in young donors a travel history seems appropriate.

\(^2\) Optional: per discretion of the donor physician in charge or as required by standards or (national) legislation.

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