

## Change Notification for the UK Blood and Tissue Services

**Notification date** 23 July 2026  
**Effective date** 11 August 2026  
**Implementation** To be determined by each Service

CN 12-2026

### Mosquito-borne viruses

**Please note that this document supersedes CN 12-2026 (v1.0), circulated on 30 June 2026.**

An omitted amendment in that version has been corrected. This is highlighted in green on **page 5**.

| Content changed                                   | Type of change     | Guidelines affected                              |
|---------------------------------------------------|--------------------|--------------------------------------------------|
| <b>1</b> Tropical viruses                         | Updated entry      | <b>Whole blood</b>                               |
| <b>2</b> Tropical viruses – plasmapheresis donors | Updated entry      | <b>Whole blood</b>                               |
| <b>3</b> ‘See if relevant’ links                  | Updated hyperlinks | <b>Whole blood</b>                               |
| <b>4</b> Tropical viruses                         | Updated entry      | <b>Tissue (deceased)</b><br><b>Tissue (live)</b> |
| <b>5</b> Tropical viruses                         | Updated entry      | <b>Bone marrow</b>                               |
| <b>6</b> Tropical viruses                         | Updated entry      | <b>Cord blood</b>                                |
| <b>7</b> ‘Tropical viruses’ risk in the GDRI      | Renamed risk       | <b>Geographical index</b>                        |



**Dr Jayne Hughes**

Chair, Standing Advisory  
Committee on Care and  
Selection of Donors (SACCS)



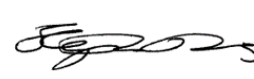
**Dr Kenny Douglas**

Chair, Standing Advisory  
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**Note:** this document indicates **inserted** and **deleted** text. This formatting will not apply in the published text.

## 1. Mosquito-borne ~~Tropical~~ viruses

| Guidelines affected | Reason for change                                                                                                                                                                                                                                                                                                                                |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Whole blood</b>  | <p>Entry renamed from 'Tropical viruses' to 'Mosquito-borne viruses' with equivalent changes to terminology throughout the text.</p> <p>The deferral period after illness in a mosquito-borne virus risk area has been reduced from 6 months to 4 months.</p> <p>Information about seasonal risk has been added to 'Additional information'.</p> |

### Essential information

|                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Definition/s</b> | <p><u>Mosquito-borne virus risk areas</u> <del>Tropical virus endemic areas</del> are shown in the 'Geographical Disease Risk Index' <u>which includes details of the specific viral risks present.</u> <del>as a Tropical Virus risk.</del></p> <p><u>The day that a donor leaves a risk area is defined as Day 0.</u></p>                                                                                                                                                                                                                                                                                                                             |
| <b>Includes</b>     | <p><del>Tropical viruses:</del></p> <ul style="list-style-type: none"> <li>Chikungunya Virus, also known as CHIKV</li> <li>Dengue Virus, also known as Dengue Fever</li> <li>Yellow Fever, also known as YF</li> <li>Zika Virus, also known as ZIKV, and Zika Virus Fever</li> </ul> <p>This entry applies to donors who will donate whole blood, platelets and other cellular components.</p>                                                                                                                                                                                                                                                          |
| <b>Excludes</b>     | <p>This entry does not apply to donors who will only donate plasma for fractionation. For these donors, see '<u>Mosquito-borne</u> <del>Tropical</del> viruses - plasmapheresis donors'.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Obligatory</b>   | <p><b>Must not donate if:</b></p> <ol style="list-style-type: none"> <li>It is less than <u>4</u> <del>6</del> months <u>since</u> <del>from a donor's return from a Tropical Virus Risk endemic area and</del> the donor has been diagnosed with Chikungunya, Dengue, Yellow Fever or Zika Virus infection <del>whilst there or following their return to the UK.</del></li> <li>It is less than <u>4</u> <del>6</del> months <u>since the donor was last in a mosquito-borne virus risk area</u> <del>from a donor's return from a Tropical Virus Risk endemic area</del> and the donor has either had a history of symptoms suggestive of</li> </ol> |

|                      |                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                      | Chikungunya, Dengue, Yellow Fever or Zika Virus infection whilst there or following their return to the UK.                                                                                                                                                                                                                                                                                                                           |
|                      | 3. In other cases, it is <u>28 days or less since the donor was last in a mosquito-borne virus risk area.</u> <del>less than 4 weeks from a donor's return from a Tropical Virus Risk endemic area.</del>                                                                                                                                                                                                                             |
| <b>Discretionary</b> | All donors may be accepted <u>4 6</u> months after their return from an affected area or resolution of symptoms. <u>If the donor has not had a diagnosis of a mosquito-borne virus, nor has symptoms suggestive of infection, they may be accepted once more than 28 days have passed since they were last in a risk area.</u> <del>This may be reduced to 4 weeks if they have had neither symptoms nor evidence of infection.</del> |

## Supporting information

|                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>See if relevant</b>        | <ul style="list-style-type: none"> <li>Geographical Disease Risk Index for countries with a current <u>mosquito-borne tropical</u> virus risk</li> <li>Infection, general</li> <li>Malaria</li> <li>South American trypanosomiasis</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Additional information</b> | <p>Chikungunya, Dengue, Yellow Fever and Zika viruses are spread by the day-flying mosquito species <i>Aedes aegypti</i> and <i>Aedes albopictus</i>.</p> <p><b>As</b> These mosquitoes are typically found in tropical and subtropical regions <u>including the main geographical areas affected by tropical virus infection are</u> the Caribbean, South and Central America, Mexico, Africa, the Pacific Islands, Southeast Asia, the Indian sub-continent, Hawaii and northern parts of Australia.</p> <p>The range of <i>Aedes albopictus</i> is <del>also</del> increasing into more temperate zones, leading to outbreaks of <u>mosquito-borne tropical</u> virus disease in new areas. <u>This includes seasonal</u> <del>There have been</del> outbreaks of Dengue and Chikungunya in parts of Europe. <u>The GDRI entry for mosquito-borne virus risk areas will indicate whether a risk should be applied all year or can be applied seasonally.</u></p> <p>Position statements <u>on mosquito-borne viruses</u> are available.</p> <p><b>Chikungunya Virus:</b></p> <p>Chikungunya is an alphavirus that can cause a wide spectrum of disease. This may range from no or minimal symptoms to death. Most commonly it causes arthritis (typically in the knee, ankle and small joints of the extremities), high fever and a maculopapular rash.</p> |

Chikungunya Virus is found in countries in Asia, Africa, Central and South America, and in the islands of the Caribbean. There is no evidence of person-to-person transmission except through blood transfer. Transfusion-transmission from an asymptomatic individual has not been documented. Nevertheless, restrictions after travel to a Chikungunya virus risk area were introduced to reduce any risk of transmission through blood or tissue donation.

#### **Dengue Virus:**

Dengue Virus is a flavivirus that typically gives rise to abrupt high fever with a range of accompanying symptoms.

Dengue fever (DF) is the most common insect-borne disease worldwide. Dengue is currently considered endemic in over ~~approximately~~ 140 countries. Transfusion-transmission has been reported.

Overall, up to 75% of cases are asymptomatic or mild. If symptoms occur, they can range from non-specific acute febrile illness to severe disease including dengue haemorrhagic fever and dengue shock syndrome. Mild cases may be misdiagnosed as other febrile illnesses.

#### **Yellow Fever Virus:**

Yellow Fever Virus is a flavivirus which is found in Africa, South America, Central America and parts of the Caribbean.

Symptoms of Yellow Fever include high temperature, headache, nausea and vomiting, muscle pains and backache. One in four individuals may suffer from jaundice and bleeding from the gastrointestinal tract and other sites.

#### **Zika Virus:**

Zika Virus is a flavivirus which was known to occur in Africa and parts of Southeast Asia. More recently, Zika Virus has been associated with epidemic outbreaks in the Pacific region and in the Americas. As well as mosquito-borne infection, Zika Virus can be spread through sexual transmission.

Infection is usually asymptomatic or presents as a mild self-limiting febrile illness. More severe disease and hospitalisation are rare but infection during pregnancy carries a high risk of congenital abnormalities in the baby. Zika Virus infection may be mistaken for Chikungunya or Dengue infections as these viruses often co-circulate.

#### **Regulatory information**

This entry is a requirement of the Blood Safety and Quality Regulations 2005.

## 2. Mosquito-borne ~~Tropical~~ viruses – plasmapheresis donors

| Guidelines affected | Reason for change                                                                                                                                                                                                                                                     |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Whole blood</b>  | <p>Entry renamed from 'Tropical viruses – plasmapheresis donors' to 'Mosquito-borne viruses – plasmapheresis donors' with equivalent changes to terminology throughout the text.</p> <p>Yellow Fever travel criteria for plasmapheresis donors have been relaxed.</p> |

### Essential information

|                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Definition/s</b> | <p><u>Mosquito-borne virus risk areas</u> <del>Tropical virus endemic areas</del> are shown in the 'Geographical Disease Risk Index' which includes details of the specific viral risks present.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Includes</b>     | <p><del>Tropical viruses:</del></p> <ul style="list-style-type: none"> <li>• Chikungunya Virus, also known as CHIKV</li> <li>• Dengue Virus, also known as Dengue Fever</li> <li>• Yellow Fever, also known as YF</li> <li>• Zika Virus, also known as ZIKV, and Zika Virus Fever</li> </ul> <p>This entry applies to donors who will only donate plasma for fractionation.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Excludes</b>     | <p>This entry does not apply to donors who will donate whole blood, platelets and other cellular components. For these donors, see '<u>Mosquito-borne</u> <del>Tropical</del> viruses'.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Obligatory</b>   | <p><b>Must not donate if:</b></p> <p><u>The donor was diagnosed with Chikungunya Virus, Dengue Virus, Yellow Fever Virus or Zika Virus infection and the donor has not fully recovered from their illness.</u></p> <p><del>1. It is less than 6 months from a donor's return from a Yellow Fever risk area and the donor has been diagnosed with Yellow Fever whilst there or following their return to the UK.</del></p> <p><del>2. It is less than 6 months from a donor's return from a Tropical Virus Risk endemic area and the donor has either had a history of symptoms suggestive of Yellow Fever whilst there or following their return to the UK.</del></p> <p><del>3. The donor was diagnosed with Chikungunya Virus, Dengue Virus or Zika Virus infection and the donor has not fully recovered from their illness.</del></p> |

## Discretionary

1. If the donor has returned from a [mosquito-borne virus](#) *Chikungunya Virus, Dengue Virus or Zika Virus* risk area and the donor is well, accept [for plasma for fractionation](#).
2. ~~If it more than 28 days since the donor has returned from a Yellow Fever risk area, and the donor has been well while there and after their return to the UK, accept.~~

## Supporting information

### See if relevant

- Geographical Disease Risk Index for countries with a current [mosquito-borne](#) ~~tropical~~ virus risk
- Infection, general
- Malaria - plasmapheresis donors
- [Mosquito-borne viruses](#)
- South American trypanosomiasis - plasmapheresis donors

### Additional information

~~Chikungunya, Dengue, Yellow Fever and Zika viruses are spread by the day-flying mosquito species *Aedes aegypti* and *Aedes albopictus*.~~

~~As these mosquitoes are typically found in tropical and subtropical regions, the main geographical areas affected by tropical virus infection are the Caribbean, South and Central America, Mexico, Africa, the Pacific Islands, Southeast Asia, the Indian sub-continent, Hawaii and northern parts of Australia.~~

~~The range of *Aedes albopictus* is also increasing into more temperate zones, leading to outbreaks of tropical virus disease in new areas. There have been outbreaks of Dengue and Chikungunya in parts of Europe.~~

#### ***Chikungunya Virus:***

~~Chikungunya is an alphavirus that can cause a wide spectrum of disease. This may range from no or minimal symptoms to death. Most commonly it causes arthritis (typically in the knee, ankle and small joints of the extremities), high fever and a maculopapular rash.~~

~~Chikungunya virus is found in countries in Asia, Africa, Central and South America, and in the islands of the Caribbean. There is no evidence of person-to-person transmission except through blood transfer. Transfusion-transmission from an asymptomatic individual has not been documented. Nevertheless, restrictions after travel to a Chikungunya Virus risk area were introduced to reduce any risk of transmission through blood or tissue donation.~~

### **~~Dengue Virus:~~**

~~Dengue Virus is a flavivirus that typically gives rise to abrupt high fever with a range of accompanying symptoms. Dengue fever (DF) is the most common insect-borne disease worldwide. Dengue is currently considered endemic in approximately 140 countries. Transfusion transmission has been reported.~~

~~Overall, up to 75% of cases are asymptomatic or mild. If symptoms occur, they can range from non-specific acute febrile illness to severe disease including dengue haemorrhagic fever and dengue shock syndrome. Mild cases may be misdiagnosed as other febrile illnesses.~~

### **~~Yellow Fever Virus:~~**

~~Yellow Fever Virus is a flavivirus which is found in Africa, South America, Central America and parts of the Caribbean. Symptoms of Yellow Fever include high temperature, headache, nausea and vomiting, muscle pains and backache. One in four individuals may suffer from jaundice and bleeding from the gastrointestinal tract and other sites.~~

### **~~Zika Virus:~~**

~~Zika Virus is a flavivirus which was known to occur in Africa and parts of Southeast Asia. More recently, Zika Virus has been associated with epidemic outbreaks in the Pacific region and in the Americas. As well as mosquito-borne infection, Zika Virus can be spread through sexual transmission. Infection is usually asymptomatic or presents as a mild self-limiting febrile illness. More severe disease and hospitalisation are rare but infection during pregnancy carries a high risk of congenital abnormalities in the baby. Zika Virus infection may be mistaken for Chikungunya or Dengue infections as these viruses often co-circulate.~~

The processes used to fractionate plasma include several measures that inactivate or remove viruses. This means that ~~some~~ travel risks [for mosquito-borne viruses described in the Geographical Disease Risk Index](#) do not need to be applied for donors who will only donate plasma for fractionation.

[Further information about mosquito-borne viruses is given in the 'Mosquito-borne viruses' entry. Position statements on mosquito-borne viruses are available.](#)

### 3. 'See if relevant' links

| Guidelines affected | Reason for change                                                                                                  |
|---------------------|--------------------------------------------------------------------------------------------------------------------|
| <b>Whole blood</b>  | Update of 'See if relevant' links due to the renaming of the 'Tropical viruses' entry as 'Mosquito-borne viruses'. |

For each entry below, the 'See if relevant' links will be updated as shown:

| Entry                       | Link to be removed                 | Link(s) to be added                    |
|-----------------------------|------------------------------------|----------------------------------------|
| Infection, acute            | <del><i>Tropical viruses</i></del> | <a href="#">Mosquito-borne viruses</a> |
| Infection, general          | <del><i>Tropical viruses</i></del> | <a href="#">Mosquito-borne viruses</a> |
| Pyrexia (Related to travel) | <del><i>Tropical viruses</i></del> | <a href="#">Mosquito-borne viruses</a> |



## 4. Mosquito-borne ~~Tropical~~ viruses

| Guidelines affected      | Reason for change                                                                                                             |
|--------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| <b>Tissue (deceased)</b> | Entry renamed from 'Tropical viruses' to 'Mosquito-borne viruses' with equivalent changes to terminology throughout the text. |
| <b>Tissue (live)</b>     | Information about seasonal risk has been added to 'Additional information'.                                                   |

### Essential information

|                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Definition/s</b>  | <p><u>Mosquito-borne virus risk areas</u> <del>Tropical virus endemic areas</del> are shown in the 'Geographical Disease Risk Index' <u>which includes details of the specific viral risks present.</u> <del>as a Tropical Virus risk.</del></p> <p><u>The day that a donor leaves a risk area is defined as Day 0.</u></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Includes</b>      | <p><del>Tropical viruses:</del></p> <ul style="list-style-type: none"> <li>• Chikungunya Virus, also known as CHIKV</li> <li>• Dengue Virus, also known as Dengue Fever</li> <li>• Yellow Fever, also known as YF</li> <li>• Zika Virus, also known as ZIKV, and Zika Virus Fever</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Obligatory</b>    | <p><b>Must not donate if:</b></p> <ol style="list-style-type: none"> <li>1. It is less than 6 months <u>since</u> <del>from a donor's return from a Tropical Virus Risk endemic area and</del> the donor has been diagnosed with Chikungunya, Dengue, Yellow Fever or Zika Virus infection <del>whilst there or following their return to the UK.</del></li> <li>2. It is less than 6 months <u>since the donor was last in a mosquito-borne virus risk area</u> <del>from a donor's return from a Tropical Virus Risk endemic area</del> and the donor has either had a history of symptoms suggestive of Chikungunya, Dengue, Yellow Fever or Zika Virus infection whilst there or following their return to the UK.</li> <li>3. In other cases, it is <u>28 days or less since the donor was last in a mosquito-borne virus risk area.</u> <del>less than 4 weeks from a donor's return from a Tropical Virus Risk endemic area.</del></li> </ol> |
| <b>Discretionary</b> | <p>All donors may be accepted 6 months after their return from an affected area or resolution of symptoms. <u>If the donor has not had a diagnosis of a mosquito-borne virus, nor has symptoms suggestive of infection, they may be accepted</u></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

once more than 28 days have passed since they were last in a risk area. ~~This may be reduced to 4 weeks if they have had no clinical evidence of infection.~~

## Supporting information

### See if relevant

- Geographical Disease Risk Index for countries with a current [mosquito-borne ~~tropical~~](#) virus risk
- Infection, general
- Malaria
- South American trypanosomiasis
- [South American trypanosomiasis, risk of](#)

### Additional information

Chikungunya, Dengue, Yellow Fever and Zika virus are spread by the day-flying mosquito species *Aedes aegypti* and *Aedes albopictus*.

~~As~~ These mosquitos are typically found in tropical and subtropical regions [including ~~the main geographical areas affected by tropical virus infection are~~](#) the Caribbean, South and Central America, Mexico, Africa, the Pacific Islands, Southeast Asia, Indian sub-continent, Hawaii and northern parts of Australia.

The range of *Aedes albopictus* is ~~also~~ increasing into more temperate zones, leading to outbreaks of [mosquito-borne ~~tropical~~](#) virus disease in new areas. [This includes seasonal ~~There have been~~ outbreaks of Dengue and Chikungunya in parts of Europe. The GDR entry for mosquito-borne virus risk areas will indicate whether a risk should be applied all year or can be applied seasonally.](#)

Position statements [on mosquito-borne viruses](#) are available.

#### Chikungunya Virus:

Chikungunya is an alphavirus that can cause a wide spectrum of disease. This may range from no or minimal symptoms to death. Most commonly it causes arthritis (typically in the knee, ankle and small joints of the extremities), high fever and a maculopapular rash.

Chikungunya Virus is found in countries in Asia, Africa, Central and South America, and in the islands of the Caribbean. There is no evidence of person-to-person transmission except through blood transfer. Transfusion-transmission from an asymptomatic individual has not been documented. Nevertheless, restrictions after travel to a Chikungunya virus risk area were introduced to reduce any risk of transmission through blood or tissue donation.

### **Dengue Virus:**

Dengue Virus is a flavivirus that typically gives rise to abrupt high fever with a range of accompanying symptoms.

Dengue fever (DF) is the most common insect-borne disease worldwide. Dengue is currently considered endemic in over ~~approximately~~ 140 countries. Transfusion-transmission has been reported.

Overall, up to 75% of cases are asymptomatic or mild. If symptoms occur, they can range from non-specific acute febrile illness to severe disease including dengue haemorrhagic fever and dengue shock syndrome. Mild cases may be misdiagnosed as other febrile illnesses.

### **Yellow Fever Virus:**

Yellow Fever Virus is a flavivirus which is found in Africa, South America, Central America and parts of the Caribbean.

Symptoms of Yellow Fever include high temperature, headache, nausea and vomiting, muscle pains and backache. One in four individuals may suffer from jaundice and bleeding from the gastrointestinal tract and other sites.

### **Zika Virus:**

Zika Virus is a flavivirus which was known to occur in Africa and parts of Southeast Asia. More recently, Zika Virus has been associated with epidemic outbreaks in the Pacific region and in the Americas. As well as mosquito-borne infection, Zika Virus can be spread through sexual transmission.

Infection is usually asymptomatic or presents as a mild self-limiting febrile illness. More severe disease and hospitalisation are rare but infection during pregnancy carries a high risk of congenital abnormalities in the baby. Zika Virus infection may be mistaken for Chikungunya or Dengue infections as these viruses often co-circulate.

## 5. Mosquito-borne ~~Tropical~~ viruses

| Guidelines affected | Reason for change                                                                                                                                                                                                                                                                                                                                |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Bone marrow</b>  | <p>Entry renamed from 'Tropical viruses' to 'Mosquito-borne viruses' with equivalent changes to terminology throughout the text.</p> <p>The deferral period after illness in a mosquito-borne virus risk area has been reduced from 6 months to 4 months.</p> <p>Information about seasonal risk has been added to 'Additional information'.</p> |

### Essential information

|              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Definition/s | <p><u>Mosquito-borne virus risk areas</u> <del>Tropical virus endemic areas</del> are shown in the 'Geographical Disease Risk Index' <u>which includes details of the specific viral risks present.</u> <del>as a Tropical Virus Risk.</del></p> <p><u>The day that a donor leaves a risk area is defined as Day 0.</u></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Includes     | <p><del>Tropical viruses:</del></p> <ul style="list-style-type: none"> <li>Chikungunya Virus, also known as CHIKV</li> <li>Dengue Virus, also known as Dengue Fever</li> <li>Yellow Fever, also known as YF</li> <li>Zika Virus, also known as ZIKV, and Zika Virus Fever</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Obligatory   | <p><b>Must not donate if:</b></p> <ol style="list-style-type: none"> <li>It is less than <u>4</u> <del>6</del> months <u>since</u> <del>from a donor's return from a Tropical Virus Risk endemic area and</del> the donor has been diagnosed with Chikungunya, Dengue, Yellow Fever or Zika Virus infection <del>whilst there or following their return to the UK.</del></li> <li>It is less than <u>4</u> <del>6</del> months <u>since the donor was last in a mosquito-borne virus risk area</u> <del>from a donor's return from Tropical Virus Risk endemic area</del> and the donor has either had a history of symptoms suggestive of Chikungunya, Dengue, Yellow Fever or Zika Virus infection whilst there or following their return to the UK.</li> <li>In other cases, it is <u>28 days or less since the donor was last in a mosquito-borne virus risk area.</u> <del>less than 4 weeks from a donor's return from a Tropical Virus Risk endemic area.</del></li> </ol> |

## Discretionary

All donors may be accepted 4 ~~6~~ months after their return from an affected area or resolution of symptoms. If the donor has not had a diagnosis of a mosquito-borne virus, nor has symptoms suggestive of infection, they may be accepted once more than 28 days have passed since they were last in a risk area. ~~This may be reduced to 4 weeks, if they have had no clinical evidence of infection while abroad and in the first 4 weeks of return to the UK.~~

If donor clearance is being carried out at less than 28 days ~~4 weeks~~ since the donor has returned to the UK, a risk assessment will be required as to whether to proceed or delay the donation so that there is a clear 28 days ~~4 weeks~~ since return to the UK and the donor has remained well.

## Supporting information

### See if relevant

- Geographical Disease Risk Index for countries with a current mosquito-borne ~~tropical~~ virus risk
- Infection, general
- Infection, tropical
- Malaria
- South American trypanosomiasis
- South American trypanosomiasis, risk of

### Additional information

When an allogeneic stem cell donor who has been asymptomatic has returned from a mosquito-borne ~~tropical~~ virus ~~endemic~~ area, the preferred option is to wait for 28 days from return before clearing the donor if the stem cell collection can be delayed.

In exceptional circumstances, and if there is a pressing clinical need to proceed to clearing the donor or collection within 28 days of return, a risk assessment should be undertaken in conjunction with the transplant centre clinicians as to how they will manage their patient. This should include awareness of the timing of the return of the donor from the mosquito-borne ~~tropical~~ virus risk ~~endemic~~ area, the likelihood of receiving a mosquito-borne ~~tropical~~ virus positive donation (with its associated risks) from an asymptomatic donor, and the option of delaying the clearance of the donor and stem cell collection plus conditioning of the patient as far as possible towards day 28 of the return of the donor.

In a situation where a risk assessment is being undertaken to clear a donation for clinical use before the preferred 28-day return from a mosquito-borne virus risk ~~an endemic~~ area due to urgent clinical need, consideration should be given to referring samples for any relevant available laboratory testing (e.g. to the Porton Down reference laboratory). Please note, if testing for these

viruses (if available) is negative, it does not necessarily mean there is no risk of transmission at less than 28 days post travel.

Chikungunya, Dengue, Yellow Fever and Zika viruses are spread by the day-flying mosquito species *Aedes aegypti* and *Aedes albopictus*.

~~The main vector for these viruses is *Aedes aegypti* (*Aedes albopictus* is another emerging vector), which is found worldwide between latitudes 35°N and 35°S. There is no epidemiologically important animal reservoir for these viruses.~~

These mosquitoes are typically found in tropical and subtropical regions including ~~The main geographical areas affected by these viruses include~~ the Caribbean, South and Central America, Mexico, Africa, the Pacific Islands, Southeast Asia, the Indian sub-continent, ~~and~~ Hawaii and northern parts of Australia. ~~Additionally, Dengue fever has been reported in Australia and there have been outbreaks of Dengue and Chikungunya in Europe.~~

The range of *Aedes albopictus* is increasing into more temperate zones, leading to outbreaks of mosquito-borne virus disease in new areas. This includes seasonal outbreaks of Dengue and Chikungunya in parts of Europe. The GDRI entry for mosquito-borne virus risk areas will indicate whether a risk should be applied all year or can be applied seasonally.

Position statements on mosquito-borne viruses are available.

#### **Chikungunya Virus:**

Chikungunya is an alphavirus that can cause a wide spectrum of disease. This may range from no or minimal symptoms to death. Most commonly it causes arthritis (typically in the knee, ankle and small joints of the extremities), high fever and a maculopapular rash.

Chikungunya Virus is found in countries in Asia, Africa, Central and South America, and in the islands of the Caribbean. ~~It is geographically widespread but since 2005, it has reached epidemic proportions in parts of India and islands in the Indian Ocean.~~ It is known to be spread by blood in symptomatic cases and, on theoretical grounds, could be spread by transfusion and transplantation of tissues and organs from people with pre-symptomatic or asymptomatic disease. A number of visitors returning from endemic areas to the UK have been diagnosed with this infection.

#### **Dengue Virus:**

Dengue Virus is a flavivirus that typically gives rise to abrupt high fever with a range of accompanying symptoms.

Dengue fever (DF) is the most common insect-borne ~~arthropod-borne~~ disease worldwide. Dengue is currently considered endemic in over 140 ~~approximately 128~~ countries.

Overall, up to 75% ~~15–90%~~ of cases are ~~may have an~~ asymptomatic or mild. ~~course of infection, but clinical presentation varies with age group.~~ If

symptoms occur, they can range from non-specific acute febrile illness to severe disease including dengue haemorrhagic fever and dengue shock syndrome. Mild cases may be misdiagnosed as other febrile illnesses.  
~~However, there is a risk of change in disease presentation and potential for increased incidence of more severe disease in older age groups due to co-circulation of different dengue types and emergence of new types in endemic areas patterns.~~

#### **Yellow Fever Virus:**

Yellow Fever Virus is a flavivirus which is found in Africa, South America, Central America and parts of the Caribbean.

Symptoms of Yellow Fever include high temperature, headache, nausea and vomiting, muscle pains and backache. One in four individuals may suffer from jaundice and bleeding from the gastrointestinal tract and other sites.

#### **Zika Virus:**

Zika Virus is a flavivirus which was known to occur in Africa and parts of Southeast Asia. More recently, Zika Virus has been associated with epidemic outbreaks in the Pacific region and in the Americas. ~~that is transmitted to humans through the bite of a carrier mosquito.~~ As well as mosquito-borne infection, Zika Virus can be spread through sexual transmission. ~~also be transmitted human to human through sexual contact.~~

Infection is usually asymptomatic or presents as a mild self-limiting febrile illness. ~~Zika infection is a rapid acute infection that in the majority of cases is asymptomatic or has very mild general symptoms.~~ More severe disease and hospitalisation are rare but infection during pregnancy carries a high risk of congenital abnormalities in the baby. ~~A small number of cases may have more apparent symptoms but hospitalisation is rare.~~ Zika Virus infection may be mistaken for Chikungunya or Dengue infections as these viruses often co-circulate.

## 6. Mosquito-borne ~~Tropical~~ viruses

| Guidelines affected | Reason for change                                                                                                                                                                                                       |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Cord blood</b>   | <p>Entry renamed from 'Tropical viruses' to 'Mosquito-borne viruses' with equivalent changes to terminology throughout the text.</p> <p>Information about seasonal risk has been added to 'Additional information'.</p> |

### Essential information

|                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Definition/s</b>    | <p><u>Mosquito-borne virus risk areas</u> <del>Tropical-virus endemic areas</del> are shown in the 'Geographical Disease Risk Index' <u>which includes details of the specific viral risks present.</u> <del>as a Tropical Virus risk.</del></p> <p><u>The day that a donor leaves a risk area is defined as Day 0.</u></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b><u>Includes</u></b> | <ul style="list-style-type: none"> <li>• <u>Chikungunya Virus, also known as CHIKV</u></li> <li>• <u>Dengue Virus, also known as Dengue Fever</u></li> <li>• <u>Yellow Fever, also known as YF</u></li> <li>• <u>Zika Virus, also known as ZIKV, and Zika Virus Fever</u></li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Obligatory</b>      | <p><b>Must not donate if:</b></p> <ol style="list-style-type: none"> <li>1. A mother has been diagnosed with Chikungunya, Dengue, Yellow Fever or Zika Virus infection whilst in <u>a mosquito-borne virus risk</u> <del>an endemic</del> area or following her return to the UK during this pregnancy.</li> <li>2. A mother has either had a history of symptoms suggestive of Chikungunya, Dengue, Yellow Fever or Zika Virus infection whilst in <u>a mosquito-borne virus risk</u> <del>an endemic</del> area or following her return to the UK during this pregnancy.</li> <li>3. In other cases, it is <u>28 days or less since the mother was last in a mosquito-borne virus risk area.</u> <del>less than 4 weeks from a mother's return from a Tropical Virus Risk endemic area.</del></li> </ol> |

### Supporting information

|                        |                                                                                                                                                                                                      |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>See if relevant</b> | <ul style="list-style-type: none"> <li>• Geographical Disease Risk Index for countries with a current <u>mosquito-borne</u> <del>tropical</del> virus risk</li> <li>• Infection, tropical</li> </ul> |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|



- Malaria
- [South American trypanosomiasis](#)
- South American trypanosomiasis, risk of

#### Additional information

[Should a situation arise where a risk assessment is warranted, seek expert virologist advice. Additional laboratory testing may be available and appropriate \(e.g. referral to the Porton Down reference laboratory\).](#)

[Chikungunya, Dengue, Yellow Fever and Zika viruses are spread by the day-flying mosquito species \*Aedes aegypti\* and \*Aedes albopictus\*.](#)

~~The main vector for these viruses is *Aedes aegypti* (*Aedes albopictus* is another emerging vector), which is found worldwide between latitudes 35°N and 35°S. There is no epidemiologically important animal reservoir for these viruses.~~

[These mosquitos are typically found in tropical and subtropical regions including](#) ~~The main geographical areas affected by these viruses include~~ the Caribbean, South and Central America, Mexico, Africa, the Pacific Islands, Southeast Asia, the Indian sub-continent, ~~and~~ Hawaii [and northern parts of Australia](#). ~~Additionally, Dengue fever has been reported in Australia and there have been outbreaks of Dengue and Chikungunya in Europe.~~

[The range of \*Aedes albopictus\* is increasing into more temperate zones, leading to outbreaks of mosquito-borne virus disease in new areas. This includes seasonal outbreaks of Dengue and Chikungunya in parts of Europe. The GDRI entry for mosquito-borne virus risk areas will indicate whether a risk should be applied all year or can be applied seasonally.](#)

Position statements [on mosquito-borne viruses](#) are available.

#### Chikungunya Virus:

Chikungunya is an alphavirus that can cause a wide spectrum of disease. This may range from no or minimal symptoms to death. Most commonly it causes arthritis (typically in the knee, ankle and small joints of the extremities), high fever and a maculopapular rash.

[Chikungunya Virus is found in countries in Asia, Africa, Central and South America, and in the islands of the Caribbean. It is geographically widespread but since 2005 it has reached epidemic proportions in parts of India and islands in the Indian Ocean.](#) It is known to be spread by blood in symptomatic cases and, on theoretical grounds, could be spread by transfusion and transplantation of tissues and organs from people with pre-symptomatic or asymptomatic disease. A number of visitors returning from endemic areas to the UK have been diagnosed with this infection.

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#### **Yellow Fever Virus:**

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#### **Zika Virus:**

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Infection is usually asymptomatic or presents as a mild self-limiting febrile illness. Zika infection is a rapid acute infection that in the majority of cases is asymptomatic or has very mild general symptoms. More severe disease and hospitalisation are rare but infection during pregnancy carries a high risk of congenital abnormalities in the baby. A small number of cases may have more apparent symptoms but hospitalisation is rare. Zika Virus infection may be mistaken for Chikungunya or Dengue infections as these viruses often co-circulate.

## 7. 'Tropical viruses' risk in the GDRI

| Guidelines affected       | Reason for change                                                                                                                                        |
|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Geographical index</b> | 'Tropical viruses' risk has been renamed as 'Mosquito-borne viruses' risk to align with changes to equivalent entries in the Donor Selection Guidelines. |

The risk fields in the GDRI will be updated as shown below. This applies to all entries.

|                                      |                                   |
|--------------------------------------|-----------------------------------|
| <b>Malaria</b>                       | [text of each entry is unchanged] |
| <b><i>Trypanosoma cruzi</i></b>      | [text of each entry is unchanged] |
| <b>West Nile Virus</b>               | [text of each entry is unchanged] |
| <b>Viral haemorrhagic fever</b>      | [text of each entry is unchanged] |
| <b><u>Mosquito-borne viruses</u></b> | [text of each entry is unchanged] |
| <b><del>Tropical viruses</del></b>   |                                   |