GUIDELINES FOR PREVENTION OF TRANSMISSION OF INFECTIOUS DISEASES FROM ORGAN DONORS TO RECIPIENTS.

OBLIGATORY SCREENING OF THE DONOR

The following tests should be run before organs are offered. The decision to accept or reject an organ from a donor with a positive test should always be taken by the responsible surgeon.

Test	Interpretation of positive reaction	Comment
HBsAg	Organs are usually not accepted.	Non-liver organs might be given to HBsAg positive recipients in urgent cases.
Anti-HBc	*Liver* is usually not accepted but can be used for emergency situations at surgeon's decision. The recipients need a long-term antiviral treatment.	Liver can be used since reactivation of HBV can be prevented by long-term antiviral treatment, but should mainly be considered in urgent cases and for recipient with serological markers indicating current (HBsAg+) or previous HBV infection (anti-HBc+, anti-HBs+/-), or immunity after vaccination (anti-HBs+). HBIG prophylaxis has no or very limited value except when the recipient is HBsAg positive.
	Non-liver organs can be used for all recipients, if the donor is also anti-HBs positive. If the donor is anti-HBs negative recipients without HBV markers should receive a single dose of HBIG prior to revascularization and short-term antiviral treatment may be considered.	The risk for HBV transmission from non-liver organs is very low and does not require life-long surveillance.
Anti-HBs	In combination with anti-HBc reactivity: see above. If anti-HBc test in negative all organs can be used (no risk, anti-HBs reactivity most probably due to previous immunization of donor).	
Anti-HCV	Organs are usually not accepted, but may be accepted if the recipient is HCV RNA positive.	
Anti-CMV IgG	Organs are accepted	
Anti-HIV	Organs are **not** accepted	

Samples taken before donation, but analysed later

Test	Interpretation of positive reaction	Comment
Anti-EBV IgG	Increased risk for EBV complications in D+/R-	Particularly important for paediatric recipients
Syphilis antibody	Indication for treatment and/or special follow-up	
Toxoplasma IgG	Toxoplasma prophylaxis should be considered for heart/lung recipients	

ACTIVE INFECTIONS IN DONOR:

- Septicaemia: Individual assessment – organs may be accepted if the causing agent and its antibiotic resistance is known, and adequate antimicrobial treatment has been given. The necessary length of treatment of the donor, and post-tx of the recipient, will in each case depend on the causative agent and the clinical conditions.
- Multiresistant bacteria: Individual assessment – organs may be accepted if antibiotic resistance is known, and adequate antimicrobial treatment has been given.
- Multi-system organ failure due to overwhelming sepsis, gangrenous bowel — Not accepted
- Active tuberculosis: — Not accepted.

- Disseminated fungal infection: Not accepted.
- Viremia: ie herpes viruses (HSV, CMV, VZV, EBV-mononucleosis), measles Not accepted
- Unknown CNS infection, HSV encephalitis and other encephalitis Not accepted

RESPONSIBILITIES:

The transplantation coordinator

- is responsible for that adequate tests being requested and performed according to the protocol, and that the results are forwared to the surgeon in charge of grafting.

The surgeon in charge of grafting

- is responsible for the acceptance and the use of the organ, and thus for knowing the results of the performed tests.
- is responsible for judging if a test could be postponed until after grafting or a mismatch could be accepted for the specific recipient.

STORING OF SERUM: Adequate material (sera) for testing and storage in the recipient centre must accompany each organ. Recipient centres should store donor and recipient (pre-transplant) serum (10 years).

ADDENDUM – Ebola virus and other special cases

Other infections pose risks for complications after transplantation and may be of relevance in certain situations. This issue has become more relevant in the last decade due to immigration from and travels to regions where certain infections are endemic.

Ebola virus	Travellers or residents returning from an Ebola affected area should be deferred from donation of any organ for **two month after return.** This period can be reduced to one month in the case of urgent need for transplantation, provided that the potential donor tests negative for Ebola virus by nucleic acid amplification test (NAT)
HTLV-I/II	Anti-HTLV-I/II testing of donors from geographic areas with higher prevalence of HTLV-I/II infections (e.g. Japan, South America) may be considered. If positiv organs are not accepted.
West Nile virus	The risk is too low to justify testing. Exclusion of donors may rarely be considered on the basis of possible recent exposure and clinical picture.
Q fever (Coxiella burnetii)	The risk is too low to justify testing. Exclusion of donors may rarely be considered on the basis of possible recent exposure and clinical picture.
Lymphocytic choriomeningitis virus	The risk is too low to justify testing.
Malaria	Donors originating from or who have recently visited endemic areas can be accepted without testing before transplantation if the donor is asymptomatic, but (post-transplantation) testing of donor blood for malaria antibodies may be considered. If there are signs of recent malaria, the organ may be accepted only if adequate testing has been performed and anti-malaria treatment has been given.
Chaga's disease (trypanosoma cruzi)	For donors who have lived in endemic areas in South and Central America for more than 3 years, the possibility of Chagas disease should be considered and the donor possibly not accepted.
Leishmania	The risk of transmission is very low but known untreated infection is a contraindication for organ donation
MRSA	Donors who are considered at risk for MRSA (recently given care abroad or at a unit where MRSA is present) should be tested for MRSA. Positive culture without infection is not a contraindication for donation.

These recommendations were proposed by the Scandiatransplant working group on April, 2015. It is a revision of previous recommendations from 2013.

Members of the working group were
Dr Vanda Friman, Chair, Department of Infectious Diseases, Sahlgrenska University Hospital, Göteborg, Sweden,
Dr Gunnar Gunnarsson, Department of Infectious Diseases, Landspitali–University Hospital, Reykjavik, Iceland
Dr Hannu Jalanko,
Dr Magnus Lindh, Department of Virology, Sahlgrenska University Hospital, Göteborg, Sweden,
Dr Claus Moser,
Dr Ole Øyen, Department of Transplantation Surgery, Rikshospitalet, Oslo, Norway