



American Association of Tissue Banks

03 March 2010

Blood and Tissues Unit, and
Therapeutic Goods Committee
Standards and Code of GMP
Office of Devices, Blood and Tissues
Therapeutic Goods Administration
PO Box 100
WODEN ACT 2606

In Re: THERAPEUTIC GOODS ACT 1989, Section 10

Draft “Therapeutic Goods Order No. XX - Standards for minimising infectious disease transmission via therapeutic goods that are human blood and blood components, human tissues and human cellular therapies”

Dear Madams and Sirs:

The American Association of Tissue Banks [hereinafter referred to as the “AATB” or the “Association”] submits these comments in response to the Therapeutic Goods Administration’s (TGA) publication of the above-captioned document. These draft Standards were published online on December 7, 2009.

I. THE INTEREST OF THE AATB

The AATB is a voluntary, professional, scientific and educational organization. The Association was founded in 1976 and is tax-exempt under Section 501(c)(3) of the Internal Revenue Code of the United States (U.S.). The AATB’s mission is public health.

The Association is dedicated to ensuring that human tissues intended for transplantation are safe and free of infectious disease, of uniform high quality, and available in quantities sufficient to meet national needs. We also aim to harmonize cell and tissue regulations that are being developed by our international tissue banking colleagues.

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To further this mission, the Association has, since 1985, published the recognized authoritative source for the tissue banking profession, the AATB's *Standards for Tissue Banking*. Beginning in 1986, the AATB initiated a voluntary Accreditation Program to ensure that tissue-banking activities in the U.S. are being performed in a professional manner in compliance with these *Standards*. All of the AATB's institutional members must be accredited and re-inspected and re-accredited every three years. The Association's membership currently includes approximately 1,000 individual members and 111 accredited tissue banks in the U.S. and Canada that may be engaged in tissue donor screening and obtaining or verifying donation consent/authorization, as well as the recovery, processing, storage and/or distribution of human tissue.

The AATB has consistently and publicly supported balanced governmental regulation aimed at safeguarding human tissues from disease transmission. The Association has long advocated and continues to support balanced and reasonable regulation of tissue banking.

The AATB's *Standards* contain extensive requirements for donor screening and testing to ensure safety and to avoid disease transmission. With the exception of ocular tissue, AATB-accredited tissue banks provide most of the commonly used structural tissues for clinical use in the United States and many of these finished tissue allografts are distributed internationally. The Association is, therefore, interested in these draft Standards and its potential effects on the safety, effectiveness and supply of human tissue for transplantation.

Over the years, the AATB has provided useful information to assist regulatory authorities in addressing public health challenges, most notably disease transmission. The Association has worked with state, national, and international regulators to develop appropriate regulatory schemes in this evolving field of medicine. These comments are intended to continue that collegial and cooperative spirit. The AATB also intends to continue to provide constructive criticism and recommendations for regulatory changes where it believes they are warranted.

The AATB agrees with a majority of what is contained in these draft Standards and we commend the TGA for its work to construct them.

These recommendations are submitted for consideration and they are aligned with the spirit of the TGA's new biological framework, which has been described as being in development "to address the following:

- the need to minimise infectious disease risk associated with the use of these products/therapies;
- the desirability of international harmonisation of regulatory requirements;
- the need for greater flexibility to respond to changes in technology; and

- the desirability of adopting a risk-based approach to regulation reflecting the differing risk profiles of each biological product.¹

AATB's comments, recommendations, and rationale we offer in this document are in agreement, and often based upon, these four key points described above.

The need for international harmonization of regulatory requirements for tissue allografts is very important for patient safety everywhere. Today, any nation's citizens can experience environmental disasters that can require a need for massive amounts of medical supplies to treat victims and this can quickly exhaust the local inventory of allograft types available for transplantation. Brushfires, earthquakes, tsunamis, or hurricanes occur, and domestic factory explosions and fires erupt, plus acts of terrorism, can affect many. Situations can include an immediate as well as ongoing need for human tissues for transplantation to treat burns and other traumatic injuries such as bone fractures and soft tissue injuries from blasts, falls, or other accidents. As you now, the therapeutic use of allografts can alleviate pain, save limbs, and retain functionality and quality of life. Tissue allografts from deceased donors, such as skin for burn use and pediatric allograft heart valves, can be life saving for recipients in need. Synthetic materials alone may not be indicated for some repairs or they may be combined with allograft tissue for others. To be able to import safe and effective allografts in times of a national emergency can benefit your citizens or it can be made impossible or severely delayed by requirements of regulations. Regulatory authorities in each nation share a common goal to protect public health so risks associated with communicable diseases should match when possible.

Due to the ability and often ease of global travel from the island continent of Australia to anywhere in the world, risks related to endemic disease in some parts of the world should be considered when screening potential donors. Conversely, some transmissible risks exist within Australia's border much as they do elsewhere.²

¹ TGA Biologicals Framework Newsletter: Issue 1 – July 2009

² 2008 Report on the global AIDS epidemic, Joint United Nations Programme on HIV/AIDS (UNAIDS)

II. COMMENTS

For purposes of clarity, our recommendations to add text to the draft Standards are underlined and italicized (e.g., *Example*), and recommendations to delete text utilize the strikethrough (e.g., ~~Example~~).

Comment #1

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Provisions:

Page 4 (*relevant part only*)

4. Interpretation

prion disease- risk of means having been exposed to the putative causative agent(s) of any one of the family of pathogenic transmissible spongiform encephalopathies through genetic (familial), environmental* or iatrogenic** means, i.e. lived in or consumed or undergone treatment with potentially contaminated product, e.g. beef products (e.g. bovine insulin), blood transfusion or tissue transplantation, in a high risk country.

Criteria used in Australia that define "risk of prion disease" include donors who have

** a) lived in or visited England, Scotland, Wales, Northern Ireland or the Isle of Man for a cumulative period of six months or more, between 1st January 1980 and 31st*

December 1996 inclusive;

***b) received a transfusion or injection of blood or blood components while in England, Scotland, Wales, Northern Ireland or the Isle of Man from 1st January 1980 onwards.*

Page 9 (*relevant part only*)

(1) The manufacturer must demonstrate that steps are taken to mitigate the risk of infectious disease transmission either during collection, manufacture or via the finished product. The policy (or policies) must address the process for selection of suitable donors and include:

(b) for manufacturers of allogeneic blood and blood components, human tissues and human cells required to be manufactured in a facility with an approved quality system, an informed risk/benefit analysis regarding donors who have resided/travelled outside Australia and at minimum, be consistent with the policy applied to donors of blood for blood components:

(i) must not be manufactured from donors who have lived in or visited England, Scotland, Wales, Northern Ireland or the Isle of Man for a cumulative period of six months or more, between 1 January 1980 and 31 December 1996 inclusive; and

(ii) must not be manufactured from donors who have received a transfusion or injection of blood or blood components while in England, Scotland, Wales,

Northern Ireland or the Isle of Man from 1 January 1980 onwards.

Recommendation:

Iatrogenic transmission of vCJD has been shown to occur via blood transfusion. With this evidence, TGA could include "France" in the list of at-risk countries related to receipt of blood or blood component transfusion or injection during the risk period (1980 to present).

Rationale:

Since 1996, 25 definite cases of vCJD have been reported in France, with 17 of those occurring since 2005, making it another country posing increased risk due to importation of beef from the UK during identified risk periods. Rationale as a risk for blood transfusion can be found in:

- U.S. Department of Health and Human Services, Food and Drug Administration, Center for Biologics Evaluation and Research, *Draft Guidance for Industry: Amendment (Donor Deferral for Transfusion in France Since 1980) to "Guidance for Industry: Revised Preventive Measures to Reduce the Possible Risk of Transmission of Creutzfeldt-Jakob Disease (CJD) and Variant Creutzfeldt-Jakob Disease (vCJD) by Blood and Blood Products,"* August 2006; and,
- Chadeau-Hyam, M. and A. Alperovitch, "Risk of Variant Creutzfeldt-Jakob Disease in France", *International Journal of Epidemiology*, 34(1):46-52, 2005.

Comment #2

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Provision:

Schedule 3

"MEDICAL & SOCIAL HISTORY

(2) Human blood and blood components, human tissues or human cells must not be collected from a living donor unless the Medical and Social History interview has been conducted by a qualified interviewer at a face-to-face interview with the donor or guardian/next-of-kin.

(3) An interview, where possible, with the next-of-kin/guardian of a deceased donor and/or examination of the medical record to obtain and document the medical and social history of the donor must take place and be documented at the time of, or no more than 7 days prior to the donation."

Recommendation:

Respectfully submit a grammatical recommendation regarding use of “next-of-kin” if the term is kept, and a consideration for use of a “knowledgeable historian” versus limitation to “next of kin/guardian:”

MEDICAL & SOCIAL HISTORY

(2) Human blood and blood components, human tissues or human cells must not be collected from a living donor unless the Medical and Social History interview has been conducted by a qualified interviewer at a face-to-face interview with the donor or ~~guardian/next of kin~~ a knowledgeable historian.

(3) An interview, where possible, with ~~the next of kin/guardian~~ a knowledgeable historian of a deceased donor and/or examination of the medical record to obtain and document the medical and social history of the donor must take place and be documented at the time of, or no more than 7 days prior to the donation.

Rationale:

“Next of kin” is not hyphenated when used as a noun. It is only hyphenated when used as an adjective (i.e., “next-of-kin interview” vs “interview with the next of kin”). See the use of “face-to-face interview” in (2) above, which is correct. If the term is deleted, this is a mute point.

Limiting the risk interview to the “next of kin/guardian” is too restrictive and is not considered best practice. This should be changed to reflect that a knowledgeable historian should be sought and this can be different people as described in the standards and regulations that follow. The TGA’s Standards could include the use of the term “knowledgeable historian,” where applicable throughout, and include a definition for it in section “4. Interpretation.”

See this definition from AATB’s *Standards for Tissue Banking*, 12th edition, 2008 which describes various, knowledgeable historians:

“Donor Risk Assessment Interview - A documented dialogue in person or by telephone with an individual or individuals who would be knowledgeable of the donor’s relevant medical history and social behavior. For example this may be: the donor, if living; the next of kin; the nearest available relative; a member of the donor’s household; other individual with an affinity relationship (e.g., caretaker, friend, significant life partner); and/or the primary treating physician. Alternatively, a living donor may complete a written questionnaire. The relevant social history is elicited by

questions regarding certain activities or behaviors that are considered to place such an individual at increased risk for a relevant communicable disease agent or disease (RCDAD).”

And consider this description from FDA’s “Final Guidance for Industry: Eligibility Determination for Donors of Human Cells, Tissues, and Cellular and Tissue-Based Products (HCT/Ps)” dated August 8, 2007 (*relevant parts only*):

“IV. DONOR SCREENING (§ 1271.75)

C. What sources of information do I review?

When you screen a potential cell or tissue donor, you must review “relevant medical records” for risk factors for, and clinical evidence of, the relevant communicable diseases listed in § 1271.75(a)(1). Risk factors are described in section IV.E., clinical evidence in section IV.F., and physical evidence in section IV.G. Relevant medical records, as defined under § 1271.3(s), means a collection of documents that includes: (1) a current donor medical history interview; (2) a current report of the physical assessment of a cadaveric donor or the physical examination of a living donor; and (3) other available records listed in § 1271.3(s)(1) through (4). We describe these three elements as follows:

1. The donor medical history interview (§ 1271.3(n)) is a documented dialogue concerning the donor's medical history and relevant social behavior:
 - a. With a living donor; or
 - b. If the donor is not living or is unable to participate in the interview, then with one or more individuals who can provide the information sought. These individuals might be:
 - The donor’s next of kin;
 - The nearest available relative;
 - A member of the donor’s household;
 - An individual with an affinity relationship with the donor (e.g., caretaker, friend, partner); or
 - The donor’s primary treating physician.

.....

The medical history interview may take place in person or by telephone.

Since a donor medical history interview is a documented dialog (§ 1271.3(n)), if a donor medical history questionnaire is self-administered, the interviewer should review and verify the answers with the individual who has filled out the questionnaire form.”

Comment #3

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Provision:

Schedule 3

“Table 2: Minimum medical and social criteria required to define a donor’s risk of recent exposure to infectious disease”

Recommendation:

Consider deleting the word “recent” to describe the table:

Table 2: Minimum medical and social criteria required to define a donor’s risk of ~~recent~~ exposure to infectious disease

Rationale:

Not all of the risks listed on the table can be described as “recent” since some reflect risk related to past 6 months, past 12 months, and ‘ever.’

Comment #4

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Provision:

Schedule 3

“Table 2: Minimum medical and social criteria required to define a donor’s risk of recent exposure to infectious disease;

Donor medical and social history criteria

- (a) Tattoo or body piercing - Period of ineligibility prior to donation for allogenic use - 6 months
- (b) Acupuncture - Period of ineligibility prior to donation for allogenic use - 6 months unless the acupuncture in that period was performed by a licensed practitioner using sterile, non-reused needles or equipment then nil exclusion period”

Recommendation:

Table 2: Minimum medical and social criteria required to define a donor's risk of recent exposure to infectious disease

Donor medical and social history criteria

- (a) Tattoo or body piercing - Period of ineligibility prior to donation for allogenic use - 6 months unless the procedure in that period was performed by a licensed practitioner using sterile, non-reused needles or equipment then nil exclusion period
- (b) Acupuncture - Period of ineligibility prior to donation for allogenic use - 6 months unless the acupuncture in that period was performed by a licensed practitioner using sterile, non-reused needles or equipment then nil exclusion period

Or,

Table 2: Minimum medical and social criteria required to define a donor's risk of recent exposure to infectious disease

Donor medical and social history criteria

- (a) Tattoo or body piercing - Period of ineligibility prior to donation for allogenic use - nil, or 6 months if sterile, non-reused needles or equipment were used
- (b) Acupuncture - Period of ineligibility prior to donation for allogenic use - nil, or 6 months unless the acupuncture in that period was performed by a licensed practitioner using sterile, non-reused needles or equipment if sterile, non-reused needles or equipment were used

Rationale:

These risk exposure activities are equivalent but do not match. The period of ineligibility is 6 months for allogeneic use and for (b) Acupuncture, it is also 6 months, however, there is an allowance to disregard this exclusion period if the acupuncture was performed by a licensed practitioner using sterile non-reused needles or equipment. It's not clear why this allowance is not true for tattoos and body piercing (i.e., no references are provided). The same risk criteria should be applied to (a) as is described for (b) unless there is supportive data available that justifies a more strict risk criterion for tattoos and body piercing. Of note is that reports of disease outbreaks related to acupuncture that have been known to occur have been due to "licensed practitioners" who did not use appropriate procedures (see references that follow) so a different screening approach for tattoos may be warranted. Keep in mind that potential donors may have received tattoos in countries other than Australia and licensure requirements, globally, are not uniform for acupuncture, tattooing, or piercing establishments or practitioners.

References:

Murray RJ, et al, Outbreak of invasive methicillin-resistant *Staphylococcus aureus* infection associated with acupuncture and joint injection. *Infect Control Hosp Epidemiol.* 2008 Sep;29(9):859-65.

MacPherson H, Lewith G, Reporting Adverse Events Following Acupuncture, *Physiotherapy*, Volume 87, Issue 1, January 2001, Pages 21-24

Stryker WS, Gunn RA, Francis DP. Outbreak of hepatitis B associated with acupuncture. *J Fam Practice* 1986;22:155–158.

Kent GP, Brondum J, et al, “A large outbreak of acupuncture-associated hepatitis B,”
American Journal of Epidemiology, 1988

An alternative approach is to consider that infectious outbreaks due to tattooing, body piercing, or acupuncture are rare. The risk is known to exist if sterile procedures were not used, e.g., contaminated instruments and/or ink were used, or shared instruments that had not been sterilized between uses were used. Knowledge that this practice occurred should be the focus of the determination the donor is not eligible or when the risk period should apply. The period of ineligibility should be 6 months but only if it is known that sterile procedures were not used. Some federal requirements use 12 months for ineligibility but the requirement for testing donors using NAT assays can theoretically reduce this time period as indicated in these draft Standards.

Reference:

FDA’s “Final Guidance for Industry: Eligibility Determination for Donors of Human Cells, Tissues, and Cellular and Tissue-Based Products (HCT/Ps)” dated August 8, 2007 (*relevant part only*):

IV. DONOR SCREENING (§ 1271.75)

E. What risk factors or conditions do I look for when screening a donor?

Following is a list of conditions and behaviors that increase the donor’s relevant communicable disease risk. Except as noted in this section, and in accordance with § 1271.75(d), you should determine to be ineligible any potential donor who exhibits one or more of the following conditions or behaviors.

10. Persons who have undergone tattooing, ear piercing or body piercing in the preceding 12 months, in which sterile procedures were not used, e.g., contaminated instruments and/or ink were used, or shared instruments that had not been sterilized between uses were used (Ref. 69).

X. REFERENCES

69. Food and Drug Administration Revised Recommendations Memorandum to All Blood Establishments for "Testing Whole Blood, Blood Components, Source Plasma and Source Leukocytes for Antibody to Hepatitis C Virus Encoded Antigen (Anti-HCV)" April 23, 1992.

Comment #5

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Provision:

Schedule 3

"Table 2: Minimum medical and social criteria required to define a donor's risk of recent exposure to infectious disease

Donor medical and social history criteria

(e) Sex worker, or received money for sex - Period of ineligibility prior to donation for allogenic use - 12 months from last contact"

Recommendation:

Table 2: Minimum medical and social criteria required to define a donor's risk of recent exposure to infectious disease

Donor medical and social history criteria

(e) Sex worker, or received drugs or money for sex - Period of ineligibility prior to donation for allogenic use - 12 months from last contact

Rationale:

Suggest adding "drugs or" to money for sex. This is a well known, additional possibility related to this risk exposure. Also, some federal requirements use a longer time period for ineligibility but the requirement for testing donors using NAT assays can theoretically reduce this time period as indicated in these draft Standards.

Reference:

FDA's "Final Guidance for Industry: Eligibility Determination for Donors of Human Cells, Tissues, and Cellular and Tissue-Based Products (HCT/Ps)" dated August 8, 2007 (*relevant part only*):

IV. DONOR SCREENING (§ 1271.75)

E. What risk factors or conditions do I look for when screening a donor?

Following is a list of conditions and behaviors that increase the donor's relevant communicable disease risk. Except as noted in this section, and in accordance with § 1271.75(d), you should determine to be ineligible any potential donor who exhibits one or more of the following conditions or behaviors.

4. Persons who have engaged in sex in exchange for money or drugs in the preceding 5 years (Refs. 18, 21, 22, 24, 25, 27, 29, 33, 34, 38, 40, 44, 45, 46, 61, 62, and 63) (risk factor for HIV, Hepatitis B and Hepatitis C).

X. REFERENCES

(too numerous to list; see

<http://www.fda.gov/BiologicsBloodVaccines/GuidanceComplianceRegulatoryInformation/Guidances/Tissue/ucm073964.htm>) - accessed 3-2-10

Comment #6

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Provision:

Schedule 3

"Table 2: Minimum medical and social criteria required to define a donor's risk of recent exposure to infectious disease

Donor medical and social history criteria

(f) Male to male sexual relationship - Period of ineligibility prior to donation for allogenic use - 12 months from last contact"

Recommendation:

Table 2: Minimum medical and social criteria required to define a donor's risk of recent exposure to infectious disease

Donor medical and social history criteria

(f) Male to male sexual relationship - Period of ineligibility prior to donation for allogenic use - 12 months from last contact

Rationale:

Recommend to remove “relationship,” leaving “male to male sex” as used in (g), or if “relationship” is kept, it needs a definition that should be used to educate the donor historian and blood/cell/tissue professionals. During a Donor Risk Assessment Interview, a living donor or a deceased donor’s historian, or the interviewing professional, can interpret the description of a “sexual relationship” in various ways according to their own idea and social ideals of what it means. This can severely limit the expectation that screening for this risk can provide. For instance, is having male-to-male sex only once, twice, or just periodically, considered a “relationship?” As is, the term is left up to an individual’s interpretation and expectation to mitigate risk related to this activity may not be realized. Some federal requirements use a longer time period for ineligibility but the requirement for testing donors using NAT assays can theoretically reduce this time period as indicated in these draft Standards.

Comment #7

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Provision:

Schedule 3

“Table 2: Minimum medical and social criteria required to define a donor’s risk of recent exposure to infectious disease

Donor medical and social history criteria

- (g) A sexual relationship with a person known to
 - have hepatitis C
 - have HIV
 - be a sex worker
 - have male to male sex

- Period of ineligibility prior to donation for allogenic use - 12 months from last contact”

Recommendation:

Table 2: Minimum medical and social criteria required to define a donor’s risk of recent exposure to infectious disease

Donor medical and social history criteria

- (g) A sexual relationship with a person known to
 - have hepatitis B
 - have clinically active (symptomatic) hepatitis C
 - have HIV
 - be a sex worker
 - have injected drugs for non-medical reasons

- have male to male sex
 - have hemophilia or other related clotting disorders who have received human-derived clotting factor concentrates
- Period of ineligibility prior to donation for allogenic use - 12 months from last contact

Rationale:

It is not clear why some risks are listed here and others are not. Another sexually transmitted virus, hepatitis B (HBV), seems to be missing in this list as well as a recognized risk behavior, injection drug use. These risks may be implied to be included by the reference to (g) in listing (l) (ii) in this section, however, this correlation is difficult to realize unless the entire section is read carefully. Suggest adding “have hepatitis B” and “have injected drugs for non-medical reasons” to the list for clarity. Also, risk for sex with someone with hepatitis C correlates with a person who has “clinically active (symptomatic) hepatitis C.” Asymptomatic carriers are not likely to transmit HCV via sexual transmission. This risk should be clarified as described above. Sexual risk with persons who have received human-derived clotting factor concentrates is missing and is not covered in listing (l) (ii) in this section. Some federal requirements use a longer time period for ineligibility but the requirement for testing donors using NAT assays can theoretically reduce this time period as indicated in these draft Standards.

Reference:

FDA’s “Final Guidance for Industry: Eligibility Determination for Donors of Human Cells, Tissues, and Cellular and Tissue-Based Products (HCT/Ps)” dated August 8, 2007 (*relevant part only*):

IV. DONOR SCREENING (§ 1271.75)

E. What risk factors or conditions do I look for when screening a donor?

Following is a list of conditions and behaviors that increase the donor’s relevant communicable disease risk. Except as noted in this section, and in accordance with § 1271.75(d), you should determine to be ineligible any potential donor who exhibits one or more of the following conditions or behaviors.

1. Men who have had sex with another man in the preceding 5 years (Refs. 17 through 46) (risk factor for HIV and Hepatitis B).

2. Persons who have injected drugs for a non-medical reason in the preceding 5 years, including intravenous, intramuscular, or subcutaneous injections (Refs. 18, 21, 22, 25, 27, 29, 33, 34, 36, 38, 42, and 45 through 59) (risk factor HIV, Hepatitis B and Hepatitis C).

3. Persons with hemophilia or other related clotting disorders who have received human-derived clotting factor concentrates in the preceding 5 years (Refs. 18 and 60) (risk factor for HIV, Hepatitis B and Hepatitis C). A donor who received clotting factors once to treat an acute bleeding event more than 12 months ago may be eligible to donate.

4. Persons who have engaged in sex in exchange for money or drugs in the preceding 5 years (Refs. 18, 21, 22, 24, 25, 27, 29, 33, 34, 38, 40, 44, 45, 46, 61, 62, and 63) (risk factor for HIV, Hepatitis B and Hepatitis C).

5. Persons who have had sex in the preceding 12 months with any person described in criteria 1 through 4 of this section or with any person who has HIV infection, including a positive or reactive test for HIV virus (Refs. 17 and 18), hepatitis B infection (Ref. 64), or clinically active (symptomatic) hepatitis C infection (Refs. 65 and 66).

X. REFERENCES

(too numerous to list; see

<http://www.fda.gov/BiologicsBloodVaccines/GuidanceComplianceRegulatoryInformation/Guidances/Tissue/ucm073964.htm>) - accessed 3-2-10

Comment #8

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Provision:

Schedule 3

“Table 2: Minimum medical and social criteria required to define a donor’s risk of recent exposure to infectious disease

Donor medical and social history criteria

(h) Ever injected any drug for a non-medical reason - Period of ineligibility prior to donation for allogenic use - permanent”

Recommendation:

Table 2: Minimum medical and social criteria required to define a donor’s risk of recent exposure to infectious disease

Donor medical and social history criteria

- (h) ~~Ever~~ injected any drug for a non-medical reason, including intravenous, intramuscular, or subcutaneous injections
- Period of ineligibility prior to donation for allogenic use - ~~permanent~~ 12 months from last occurrence

Rationale:

The inclusion of examples of the types of injection methods can be useful to understand routes that may be used and avoid confusion. The period of ineligibility selected appears to be extraordinary. The requirement for testing donors using NAT assays reduces the risk time period and this concept is indicated in other parts of these draft Standards. Some federal requirements use a different time period for ineligibility for this risk but they are not as restrictive as “permanent.”

Reference:

FDA’s “Final Guidance for Industry: Eligibility Determination for Donors of Human Cells, Tissues, and Cellular and Tissue-Based Products (HCT/Ps)” dated August 8, 2007 (*relevant part only*):

IV. DONOR SCREENING (§ 1271.75)

E. What risk factors or conditions do I look for when screening a donor?

Following is a list of conditions and behaviors that increase the donor’s relevant communicable disease risk. Except as noted in this section, and in accordance with § 1271.75(d), you should determine to be ineligible any potential donor who exhibits one or more of the following conditions or behaviors.

2. Persons who have injected drugs for a non-medical reason in the preceding 5 years, including intravenous, intramuscular, or subcutaneous injections (Refs. 18, 21, 22, 25, 27, 29, 33, 34, 36, 38, 42, and 45 through 59) (risk factor HIV, Hepatitis B and Hepatitis C).

X. REFERENCES

(too numerous to list; see

<http://www.fda.gov/BiologicsBloodVaccines/GuidanceComplianceRegulatoryInformation/Guidances/Tissue/ucm073964.htm>) - accessed 3-2-10

Comment #9
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Provision:

Schedule 3

“Table 2: Minimum medical and social criteria required to define a donor’s risk of recent exposure to infectious disease

Donor medical and social history criteria

(i) A recipient of

- human derived clotting factors
- viable animal cells or tissues
- Period of ineligibility prior to donation for allogenic use - permanent”

Recommendation:

Table 2: Minimum medical and social criteria required to define a donor’s risk of recent exposure to infectious disease

Donor medical and social history criteria

(i) A recipient of

- human-derived clotting factors, except receipt of human-derived clotting factors once to treat an acute bleeding event more than 12 months ago
- or exposure to, viable animal cells, or tissues, or organs from a nonhuman animal source
- human dura mater
- Period of ineligibility prior to donation for allogenic use - permanent

Rationale:

Exposure risk is increased when a hemophiliac has received multiple regular doses of human-derived clotting factors, but risk is minimized when these clotting factors are administered once to treat an acute bleeding event (not related to chronic clotting disorder). See this part from FDA’s “Final Guidance for Industry: Eligibility Determination for Donors of Human Cells, Tissues, and Cellular and Tissue-Based Products (HCT/Ps)” dated August 8, 2007 (*relevant part only*):

IV. DONOR SCREENING (§ 1271.75)

E. What risk factors or conditions do I look for when screening a donor?

3. Persons with hemophilia or other related clotting disorders who have

received human-derived clotting factor concentrates in the preceding 5 years (Refs. 18 and 60) (risk factor for HIV, Hepatitis B and Hepatitis C). A donor who received clotting factors once to treat an acute bleeding event more than 12 months ago may be eligible to donate.

Receipt of human dura mater (aka “non-synthetic dura mater”) has long been recognized as an iatrogenic risk for CJD but seems to be missing from this list. Both standards of the AATB and the Eye Bank Association of America (EBAA) refer to this product as “human dura mater” instead of “non-synthetic dura mater” as the latter term caused confusion among our constituencies. Refer to FDA’s “Final Guidance for Industry: Eligibility Determination for Donors of Human Cells, Tissues, and Cellular and Tissue-Based Products (HCT/Ps)” dated August 8, 2007 (*relevant part only*):

IV. DONOR SCREENING (§ 1271.75)

E. What risk factors or conditions do I look for when screening a donor?

21. Persons who are at increased risk for CJD (Refs. 3 and 75). Donors are considered to have an increased risk for CJD if they have received a non-synthetic dura mater transplant, human pituitary-derived growth hormone, or have one or more blood relatives diagnosed with CJD (see criterion 22 of this section).

The universal description for xenotransplantation risk includes receipt of, or exposure to, live cells, tissues or organs from a nonhuman animal source (see *Potential donors of human tissues & cells for therapeutic use are excluded by the criterion of “transplanted xenografts” issued by the Danish Medicines Agency, Denmark (Rev 4, January 2010)*, and this passage from FDA’s “Final Guidance for Industry: Eligibility Determination for Donors of Human Cells, Tissues, and Cellular and Tissue-Based Products (HCT/Ps)” dated August 8, 2007 (*relevant part only*):

“IV. DONOR SCREENING (§ 1271.75)

E. What risk factors or conditions do I look for when screening a donor?

29. Persons who are xenotransplantation product recipients or intimate contacts of a xenotransplantation product recipient (Ref. 77).

a. For the purpose of this document, we define the following terms:

i. Xenotransplantation is any procedure that involves the transplantation,

implantation, or infusion into a human recipient of either: (1) live cells, tissues, or organs from a nonhuman animal source; or (2) human body fluids, cells, tissues, or organs that have had ex vivo contact with live nonhuman animal cells, tissues, or organs.

ii. Xenotransplantation products include live cells, tissues, or organs used in xenotransplantation. Biological products, drugs, or medical devices sourced from nonliving cells, tissues or organs from nonhuman animals, including but not limited to porcine insulin and porcine heart valves, are not considered xenotransplantation products.

iii. Xenotransplantation product recipient means a person who undergoes xenotransplantation.

iv. Intimate contact of a xenotransplantation product recipient means a person who has engaged in activities that could result in intimate exchange of body fluids, including blood or saliva, with a xenotransplantation product recipient. Examples of intimate contacts include sexual partners, household members who share razors or toothbrushes, and health care workers or laboratory personnel with repeated percutaneous, mucosal, or other direct exposures. We do not consider sharing of housing or casual contact, such as hugging or kissing without the exchange of saliva, to be intimate contact.

b. To determine whether a potential HCT/P donor is a xenotransplantation product recipient, or is the intimate contact of a person who has received a xenotransplantation product, you should determine whether the potential donor, his/her sexual partner, or any member of his/her household has ever had a transplant or other medical procedure that involved being exposed to live cells, tissues, or organs from an animal. If the potential donor or his/her sexual partner is the recipient of a xenotransplantation product, you should defer the donor. If the potential donor is a member of the xenotransplantation product recipient's household, you should determine whether the potential donor has been exposed to blood, saliva, or other body fluids from the xenotransplantation product recipient. If the potential donor has been exposed to any of these fluids, you should defer the donor.

Note: There are circumstances in which it might not be necessary to defer a potential HCT/P donor who is an intimate contact of a recipient of certain xenotransplantation products. For example, an advisory committee recommended and we concur that intimate contacts of persons who have received the product EpicelTM do not need to be deferred from blood

donation, because the risk of zoonotic transmission from this product is minimal as the non-human animal cells used in the manufacture of this product originate from a well-characterized cell line. For this same reason, intimate contacts of EpicelTM recipients need not be deferred from tissue donation (Ref. 78) (Note: You should defer EpicelTM recipients from tissue donation)."

Comment #10

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Provision:

Schedule 3

"Table 2: Minimum medical and social criteria required to define a donor's risk of recent exposure to infectious disease

Donor medical and social history criteria

(j) known to be infected with

- hepatitis C
- HIV
- HTLV 1/HTLV 2

- Period of ineligibility prior to donation for allogenic use - ineligible

(k) suspected to be infected with

- hepatitis C
- HIV
- HTLV 1/HTLV 2

- Period of ineligibility prior to donation for allogenic use - ineligible until a disease free state can be established"

Recommendation:

Table 2: Minimum medical and social criteria required to define a donor's risk of recent exposure to infectious disease

Donor medical and social history criteria

(j) known to be infected with

- hepatitis C
- HIV
- HTLV 1/HTLV 2 (*exempt tissue that is not rich in viable leukocytes*)

- Period of ineligibility prior to donation for allogenic use - ineligible

(k) suspected to be infected with

- hepatitis C
 - HIV
 - HTLV 1/HTLV 2 (*exempt tissue that is not rich in viable leukocytes*)
- Period of ineligibility prior to donation for allogenic use - ineligible until a disease free state can be established

Rationale:

HTLV is a cell-associated disease so is not relevant if a sufficient number of viable leukocytes are not present to be able to transmit disease. Many finished tissue allografts may be devoid of cells and/or viable cells. To promote harmonization with the Food and Drug Administration's requirements for human cells, tissues, and cellular and tissue-based products at: § 1271.3(r)(ii); § 1271.75(b); § 1271.85(b)(1)(i)(ii); and appropriate parts of the Final Guidance for Industry: Eligibility Determination for Donors of Human Cells, Tissues, and Cellular and Tissue-Based Products (HCT/Ps), dated August 2007, we hope this change is made.

Reference:

FDA's Final Rule, Eligibility Determination for Donors of Human Cells, Tissues, and Cellular and Tissue-Based Products, dated 24 May 2004 (*relevant parts only*):

§ 1271.3 How does FDA define important terms in this part?

(r) Relevant communicable disease agent or disease means:

(1)(i) For all human cells and tissues, a communicable disease or disease agent listed as follows:

- (A) Human immunodeficiency virus, types 1 and 2;
- (B) Hepatitis B virus;
- (C) Hepatitis C virus;
- (D) Human transmissible spongiform encephalopathy, including Creutzfeldt- Jakob disease; and
- (E) Treponema pallidum.

(ii) For viable, leukocyte-rich cells and tissues, a cell-associated disease agent or disease listed as follows:

- (A) Human T-lymphotropic virus, type I; and
- (B) Human T-lymphotropic virus, type II.

§ 1271.75 How do I screen a donor?

(b) Donors of viable, leukocyte-rich cells or tissue. In addition to the relevant communicable disease agents and diseases for which screening is required under paragraph (a) of this section, and except as provided under § 1271.90, you must screen the donor of viable, leukocyte-rich cells

or tissue by reviewing the donor's relevant medical records for risk factors for and clinical evidence of relevant cell-associated communicable disease agents and diseases, including Human T- lymphotropic virus.

§ 1271.85 What donor testing is required for different types of cells and tissues?

(b) Donors of viable, leukocyte-rich cells or tissue. In addition to the relevant communicable disease agents for which testing is required under paragraph (a) of this section, and except as provided under § 1271.90,

(1) You must test a specimen from the donor of viable, leukocyte-rich cells or tissue to adequately and appropriately reduce the risk of transmission of relevant cell-associated communicable diseases, including:

- (i) Human T-lymphotropic virus, type I; and
- (ii) Human T-lymphotropic virus, type II.

Comment #11

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Provision:

Schedule 3

"Table 2: Minimum medical and social criteria required to define a donor's risk of recent exposure to infectious disease

Donor medical and social history criteria

(s) Being a recipient of allogeneic organ(s) or cells, or deceased donor tissue allograft - Period of ineligibility prior to donation for allogeneic use - permanent"

Recommendation:

Table 2: Minimum medical and social criteria required to define a donor's risk of recent exposure to infectious disease

Donor medical and social history criteria

~~(s) Being a recipient of allogeneic organ(s) or cells, or deceased donor tissue allograft - Period of ineligibility prior to donation for allogeneic use - permanent~~

Rationale:

Recommend deleting the criterion entirely. We respectfully disagree that there is increased risk related to 'ever' receiving a tissue allograft that originated from a deceased donor. A permanent deferral is impractical and unwarranted. In a sense, this implies that donors of tissue allografts are not screened or tested and are not safe, but

this is not true. If a risk assessment analysis was performed that indicates this is a substantial risk, it should be published/shared. The risk criterion described here is not found in the following regulations or directives so, on a global scale, it would only appear in TGA's Standards and restrict cell and tissue import potential:

- U.S. FDA rules and guidance at 21 CFR 1271 that regulates HCT/Ps for transplant, infusion or transfer;
- Health Canada's Regulations for Cells, Tissues, and Organs, or CSA's Standards; and
- European Commission Directives for Human Cells and Tissues for Transplantation.

A similar reference to this draft criterion is found in the 26th edition of AABB's Standards for Blood Banks and Transfusion Services and it is listed without any reference to substantiate it. This is not an FDA criterion for donors of blood or blood components, only AABB's. See AABB's "Reference Standard 5.4.1A—Requirements for Allogeneic Donor Qualification at 9). Receipt of blood, components, human tissue, or plasma-derived clotting factor concentrates." The deferral period described for this is 12 months, not 'permanent.' Again, there is no reference made for this criterion and it's interesting that inclusion of recipients of human "cells" or "organs" is not made.

As described earlier, EU Commission Directive 2006-17-EC does not contain this criterion and there is a part that infers recipients of cells or organ transplants could be considered. See 1.1.8. (b) in Annex I (*relevant part only*):

"ANNEX I

**SELECTION CRITERIA FOR DONORS OF TISSUES AND/OR CELLS
(EXCEPT DONORS OF REPRODUCTIVE CELLS) AS REFERRED TO
IN ARTICLE 3(a)**

Selection criteria for donors are based on an analysis of the risks related to the application of the specific cells/tissues. Indicators of these risks must be identified by physical examination, review of the medical and behavioural history, biological testing, post-mortem examination (for deceased donors) and any other appropriate investigation. Unless justified on the basis of a documented risk assessment approved by the responsible person as defined in Article 17 of Directive 2004/23/EC, donors must be excluded from donation if any of the following criteria applies:

1.1.8. Indications that test results of donor blood samples will be invalid

due to:

- (a) the occurrence of haemodilution, according to the specifications in Annex II, section 2, where a pre-transfusion sample is not available; or
- (b) treatment with immunosuppressive agents.”

It is well known that patients on immunosuppressive therapy are maintained at the lowest dose possible for long-term outcome. With this in mind, a recipient of a cellular therapy product or an organ could be successfully maintained on very low doses that would not pose concern that it may mask the production of antibodies. This is also only a concern if they were to have become infected from their donor source. Recipients of tissue transplants are not treated with immunosuppressive drugs so suppression of an antibody response is not a concern. This, too, is only a concern if they were to have become infected from their donor source, which is not likely.

Comment #12

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Provision:

Schedule 3

“(5) A potential donor of allogeneic tissues or cells who received

- (a) live vaccine is ineligible to donate tissues if the minimum donor exclusion period has not been exceeded as set out in Table 3.

Table 3: Ineligibility period for potential tissue donors who have received a live vaccine

- (b) any of the following vaccines is not required to be deferred provided the donor is well:
 - (i) Cholera and typhoid vaccines with killed bacteria
 - (ii) Capsular polysaccharide typhoid fever vaccine
 - (iii) Vaccines with inactivated viruses
 - (iv) Toxoids
 - (v) Diphtheria and tetanus
 - (vi) Hepatitis A and Hepatitis B if no exposures have occurred.
 - (vii) Rabies, tick-borne encephalitis (where exposure has occurred a one year deferral post exposure is required)
 - (viii) Meningococcal
 - (ix) Subunit vaccines e.g. cervical cancer vaccine”

Recommendation:

(5) A potential donor of allogeneic tissues or cells who received has a recent history of

vaccination with a live attenuated virus where a risk of transmission is considered to exist

~~(a) live vaccine is ineligible to donate tissues if the minimum donor exclusion period has not been exceeded as set out in Table 3.~~

~~Table 3: Ineligibility period for potential tissue donors who have received a live vaccine~~

~~(b) any of the following vaccines is not required to be deferred provided the donor is well:~~

- ~~(i) Cholera and typhoid vaccines with killed bacteria~~
- ~~(ii) Capsular polysaccharide typhoid fever vaccine~~
- ~~(iii) Vaccines with inactivated viruses~~
- ~~(iv) Toxoids~~
- ~~(v) Diphtheria and tetanus~~
- ~~(vi) Hepatitis A and Hepatitis B if no exposures have occurred.~~
- ~~(vii) Rabies, tick-borne encephalitis (where exposure has occurred a one year deferral post exposure is required)~~
- ~~(viii) Meningococcal~~
- ~~(ix) Subunit vaccines e.g. cervical cancer vaccine~~

Rationale:

These criteria are exhaustive and may be applicable to blood donors but risk due to receipt of a live vaccination has not been characterized or established as relevant for donors of tissue allografts. For a tissue donor with a recent history of vaccination with a live attenuated virus, a risk assessment analysis should be performed by the responsible person of the tissue establishment to determine if a risk of transmission exists. See 1.1.12. in Annex I (*relevant part only*):

“ANNEX I

**SELECTION CRITERIA FOR DONORS OF TISSUES AND/OR CELLS
(EXCEPT DONORS OF REPRODUCTIVE CELLS) AS REFERRED TO
IN ARTICLE 3(a)**

Selection criteria for donors are based on an analysis of the risks related to the application of the specific cells/tissues. Indicators of these risks must be identified by physical examination, review of the medical and behavioural history, biological testing, post-mortem examination (for deceased donors) and any other appropriate investigation. Unless justified on the basis of a documented risk assessment approved by the responsible person as defined in Article 17 of Directive 2004/23/EC, donors must be excluded from donation if any of the following criteria applies:

1.1.12. Recent history of vaccination with a live attenuated virus where a risk of transmission is considered to exist.”

There is a plan this year for the AATB’s Physicians Council, Standards Committee, and Board of Governors to discuss adoption of the EU Directive’s criterion at 1.1.12. The risk criterion described in the TGA draft Standard includes specifics for many vaccinations and this detail is not found in any other cell or tissue regulations. This kind of detailed donor evaluation, which has not been scientifically substantiated regarding risk for transmission from tissue allografts, could restrict cell and tissue import potential. We encourage the TGA authorities to consult authorities from the US FDA, Health Canada, and the European Commission regarding this subject.

Comment #13

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Provision:

Schedule 4

SAMPLING, TEST KITS, TEST PROTOCOLS AND TEST MANAGEMENT

(11) Where screening protocols change during the life of a product in storage, where possible and practicable the donor’s archived serum/plasma must be retested with the new screening test protocol prior to release of human blood and blood components, human tissue or human cellular therapy products.

Recommendation:

(11) Where screening protocols change during the life of a product in storage, where possible and practicable the donor’s archived serum/plasma ~~must~~ should be retested with the new screening test protocol prior to ~~release~~ distribution of human blood and blood components, human tissue or human cellular therapy products.

Rationale:

As described in the provision, testing an archive donor sample may not be practical and may not be possible. Rather than a suggestion to delete it, the changes proposed above should suffice, however, deleting the provision should be considered. Allograft tissue expiration dating can be up to 10 years and this often surpasses the validated archive storage time for infectious disease test kits. There is a false sense of security when testing an archive sample that has been stored for a length of time not validated for test performance. Using such results to (re)determine donor suitability should be discouraged. This requirement is not found in other cell or tissue regulations so we encourage the TGA authorities to consult authorities from the US FDA, Health Canada,

and the European Commission regarding this matter.

Comment #14

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Provision:

Schedule 5

DONOR TESTING AND EXAMINATION

(1) “(b) To address the possible vertical transmission of infectious agents in infant donors of less than 18 months old, or up to 6 months beyond breast feeding, whichever is the greater time,

(i) the birth mother must also be screened and tested in accordance with Schedules 4 and 5(1)(a);

Recommendation:

(1) “(b) To address the possible vertical transmission of infectious agents in infant donors of less than 18 months old, or up to 6 months beyond breast feeding, whichever is the greater time,

(i) the birth mother must also be screened ~~and tested~~ in accordance with Schedules 4 ~~and 5(1)(a)~~; and, the birth mother must be tested instead of the donor when the donor is less than one month of age.

Rationale:

The draft requirement to test both the birth mother and the infant donor as described here is burdensome, unnecessary, increases costs, and is a requirement not found in other regulations. Maternal antigen and antibody that can cross the placenta should not be a concern except during the first month after birth before the infant donor’s immune system has matured. In this case of a neonate, the mother’s blood should be tested, not the neonate donor’s. Past one month of age, it is no longer necessary to test the mother’s blood when the donor’s (child’s) blood should be used. Screening (not testing) the birth mother for communicable disease risks by obtaining appropriate medical and behavioral history during the time periods described is in harmony with tissue and cell regulations globally.

Reference:

FDA’s “Final Guidance for Industry: Eligibility Determination for Donors of Human Cells, Tissues, and Cellular and Tissue-Based Products (HCT/Ps)” dated August 8, 2007 (*relevant part only*):

V. DONOR TESTING: GENERAL (§ 1271.80)

D. If a donor is one month of age or younger, from whom must I collect a specimen?

If a donor is one month of age or younger, you must collect and test a specimen from the birth mother instead of the donor (§ 1271.80(a)). The specimen for testing from the birth mother must be collected within seven days of donation by the infant (§ 1271.80(b)), unless the donation consists of peripheral blood stem/progenitor cells or bone marrow according to 1271.80(b)(1). If a specimen from the birth mother of a donor one month of age or younger is unavailable, the donor is ineligible. Specimens collected for any infant donor more than one month of age, including adopted infants, should be collected from the donor rather than the birth mother.

IV. DONOR SCREENING (§ 1271.75)

B. How do I screen a donor who is one month of age or younger?

Under § 1271.75, you must screen all donors, including infant donors one month of age or less, except as provided under § 1271.90. Since a donor who is one month of age or younger cannot participate in the donor medical history interview, you must interview another individual able to provide the information sought in the interview (§ 1271.3(n)(2)).

You should also screen the birth mother when an infant is one month of age or less. Donor screening of the birth mother should involve a donor medical history interview and review of available medical records; the physical examination or physical assessment of the birth mother is recommended when practical.

Comment #15

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Provision:

Schedule 5

DONOR TESTING AND EXAMINATION

“(2) Where cells and tissues can be stored for long periods without impairing fitness for use, repeat sampling and serological or NAAT testing of the living donor

(a) for HIV, HBV and HCV must be performed at a minimum of 180 days after collection of the donation sample, to provide assurance that the initial sample was not collected during the window period for infection.”

Recommendation:

~~(2) Where cells and tissues can be stored for long periods without impairing fitness for use, repeat sampling and serological or NAAT testing of the living donor~~

~~(a) for HIV, HBV and HCV must be performed at a minimum of 180 days after collection of the donation sample, to provide assurance that the initial sample was not collected during the window period for infection.~~

Rationale:

In the era of NAAT (NAT), the requirement for retesting is no longer needed. AATB's Standards ceased the retest requirement for living donors of surgical bone (SB) when the AATB instituted the requirement to test all donors for HIV-1 NAT and HCV NAT in March 2005. In subsequent years, the US FDA, Health Canada, and the European Commission are all in agreement and their regulations and directives do not require retesting of living donors of cells/tissues if appropriate NAT assays are performed at the time of donation. Retesting is impractical when using NAT and increases health care costs. Donor risk assessment interviews used for determining medical and behavioral risk for living donors should be no less valuable than the same histories obtained from blood donors (who are not retested at a specified interval). In the era of NAAT, a 180-day interval is too long and not necessary. This provision should be deleted.

Comment #16

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Provision:

Schedule 5

DONOR TESTING AND EXAMINATION

Table 4: Donor testing requirements

ID Testing - HTLV 1/2 (antibodies) - deceased tissue donors - √ X (indicates that the test **must** be performed and the test **must** demonstrate that the samples tested are non-reactive)

Recommendation:

Table 4: Donor testing requirements

ID Testing - HTLV 1/2 (antibodies) - deceased tissue donors --~~√X~~ (indicates that the test **must** be performed and the test **must** demonstrate that the samples tested are non-reactive)

Rationale:

As described in Comment #10 and its rationale, HTLV is a cell-associated disease so is not a relevant disease if a sufficient number of viable leukocytes are not present to be able to transmit disease. Many finished tissue allografts may be devoid of cells and/or viable cells. To promote harmonization with the Food and Drug Administration's requirements for human cells, tissues, and cellular and tissue-based products at: § 1271.3(r)(ii); § 1271.75(b); § 1271.85(b)(1)(i)(ii); and appropriate parts of the Final Guidance for Industry: Eligibility Determination for Donors of Human Cells, Tissues, and Cellular and Tissue-Based Products (HCT/Ps), dated August 2007, we hope the requirement to test all tissue donors for anti-HTLV I/II is deleted and only required for donors of tissues that are deemed "viable, leukocyte-rich."

III. CONCLUSION

The AATB thanks the TGA for the opportunity to comment on the draft guidance document. The Association commends and supports the TGA's efforts to prevent the transmission of communicable disease agents and disease by cell and tissue transplants.

As was said at the outset, the AATB has a long and valued history of working with regulators to develop appropriate regulations in this evolving field of medicine. These comments are intended to continue that collegial and cooperative spirit.

The AATB stands ready and willing to assist the TGA with this draft guidance document in any way that the Administration deems appropriate.

Sincerely and respectfully,

Scott A Brubaker

Scott A. Brubaker, CTBS
Chief Policy Officer