Staff—

Below is a letter from Dr. Wilkinson about the importance of giving irradiated blood when it is ordered.  We have had about 5 instances in the last few months where techs have not set up the appropriate IRR units for patients, and then at dispense the Cerner prompts were overridden with the result that non-irradiated units were issued and transfused.  All were FDA-reportable.

When an IRR prompt comes up at dispense, the tech MUST look at the unit to verify that it has been irradiated.  If it has not been irradiated, everything stops right there and SJMC needs to be notified.

Since all 4 hospitals have issued blood inappropriately, I would like all people who issue blood at SAH, SCH, SFH, to read her letter as well as those at SJMC.  Most people are not aware of what the patient consequences can be if they need irradiated blood and it is not provided as ordered.  If you would each prepare a sign-off sheet for your staff to document review of this material and then send a completed copy of it back to me, I would really appreciate it!

Thanks!

Teri Emerson, MT(ASCP)SBBCM

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**From:** Wilkinson, Katie (Tacoma)   
**Sent:** Friday, September 07, 2012 11:41 AM  
**To:** Emerson, Teri (Tacoma)  
**Subject:** E-mail to BB staff

Dear Blood Bankers,

I apologize for the delay, but I wanted to send you all an e-mail about the importance of **irradiation** of our blood components for patients at risk.

We irradiate blood products for certain patients because the irradiation destroys the donor’s white cells and this prevents them from multiplying in the recipient’s body.  In a healthy person, the recipient’s own immune system recognizes the donor’s lymphocytes as foreign and destroys them.  But in a person with a severely compromised immune system, they cannot destroy the foreign lymphocytes.  However, the donated lymphocytes are perfectly healthy and do not realize that they have left the donor.  The donated lymphocytes recognize the *recipient* as “foreign” and proliferate, destroying all “foreign” tissue that they find.  This response is so severe that the patient (recipient) nearly always dies.  This Graft (donor) versus Host (recipient) Disease (GVHD) causes fever, skin rash, cough, abdominal pain, diarrhea, and eventual death.  This is why we must always provide irradiated blood to patients who are at risk of GVHD.  The patients at risk are included below.

**Please make sure you do not bypass the irradiation requirement, it is among the most important requirements that we must honor in the blood bank; patient’s lives are at stake!**

If a physician requests irradiation, honor it for life, even if the doctor later decides it is not necessary, or if I have previously said it was not necessary.  We don’t know what has happened in the meantime, so please honor all requests!  If the doctor doesn’t believe it is necessary, ask them to speak to me and we can decide what to do.  However, it is easier to err on the side of caution and irradiate when requested.  It is not necessary to run all of these requests by me unless we are having a lot of trouble getting the product needed, then you can give me a call.

I have included a bit from our policy about irradiation as well (from Blood Product Attribute Policy):

Irradiation inactivates donor T lymphocytes to prevent them from proliferating in the transfusion recipient and causing transfusion associated graft versus host disease (TA-GVHD), which is nearly 100% fatal.  Indications for blood product irradiation include:

* + Hodgkin’s disease
  + Other hematologic malignancies (leukemia / lymphoma)
  + Congenital cellular immune deficiency
  + Hematopoietic stem cell transplant recipients
  + Patient’s receiving high-dose chemotherapy, radiation therapy, and/or aggressive immunotherapy, including all patients receiving fludarabine or other purine analogs
  + Neonates (less than 4 months of age)
  + Intrauterine transfusions
  + Granulocyte transfusions
  + Transfusions from biologic relatives
  + HLA-matched and/or crossmatch-compatible platelet products
  + Neuroblastoma or Medulloblastoma

Irradiation is generally not indicated in HIV/AIDS patients, patients who have undergone solid organ transplantation, or patients with solid tumors *unless* these patients are receiving intensive immunosuppressive therapy.  Frozen components, including frozen washed RBCs, FFP, and cryoprecipitate, have not been associated with TA-GVHD and do not require irradiation.

Thanks,

**Katie Wilkinson, MD**

Medical Director, Transfusion and Tissue Services

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