

- SOP No:** AHP77
- SUBJECT:** Hu-(NOD-) SCID Mouse Model of Acute Myeloid Leukemia (AML)
- POLICY:** This procedure must be performed by, or under the direct supervision of, an experienced operator.
- PRECAUTIONS:** Gloves, mask, long-sleeve gown, closed in shoes, tetanus immunization. Observe normal precautions for handling mice and human products.
- EQUIPMENT:** 26g needles & 1ml syringes.
Phosphate Buffered Saline containing 5% FCS
Sterile human AML mononuclear cells –
The cells to engraft can be
1. mononuclear cells prepared by Ficoll-Plaque density centrifugation from bone marrow or peripheral blood of AML patient donors negative for HIV, hepatitis B & C, HTLV, syphilis.
 2. *in vitro* cell lines of myeloid origin namely cell lines such as U937, HL-60, THP-1.
- Laminar flow hood for handling mice
Animal irradiator
- PROCEDURE:**
1. **Conditioning:** 48 hours before transplant, record body weight and irradiate at 250 cGy (NOD/SCID).
 2. **Transplant:** 48 hours after irradiation, inject *iv* 1-5 x 10⁶ leukemia cells in ≤200ul PBS/FCS.
 3. **Monitoring:** Clinical scoring will begin daily for each mouse on the day after transplant for the first four weeks during which time there may be weight loss associated with irradiation. Following this bi-weekly clinical scoring will be performed from weeks 4-12. Monitoring should be repeated at approximately the same time each day (see attached Clinical Score sheet). Monitoring will return to daily when increases are observed in the clinical scoring.
 4. **Experimental:** Treatments (monoclonal antibodies) can be given at any time, as required, by *ip* or *iv* injection (≤200ul PBS/FCS).
 5. **Termination:** Sacrifice mice when the Clinical Score ≥5 or at end of experiment (maximum 84 days).

RECOMMENDATION

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REVISED:

REFERENCES

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4. Tavor, S., Petit, I., Porozov, S., Avigdor, A., Dar, A., Leider-Trejo, L., Shemtov, N., Deutsch, V. Naparstek, E., Nagler, A. and Lapidot, T. (2004). CXCR4 regulates migration and development of human acute myelogenous leukemia stem cells in transplanted NOD/SCID mice. *Cancer Res* 64:2817-2824.

