

**SOP No:** AHP 69

**SUBJECT:** NOD-SCID ALL Model  
Expansion of xenograft for the production of tumor lysate and/or RNA.

**POLICY:** This procedure must be performed by an experienced operator

**PRECAUTIONS:** Gloves, mask, long-sleeve gown, closed in shoes  
The clinical score of the mice can increase rapidly in the week preceding sacrifice.

**EQUIPMENT:** 29g needles  
1ml syringes  
Phosphate buffered saline  
Primary human leukaemia cells  
Phosphate Buffered Saline containing 5% FCS

**PROCEDURE:**

1. Inject 200µL of  $1-5 \times 10^6$  human leukemia cells/mouse IV
2. Euthanase mice when they reach a clinical score of 4 or when there have 50-75% human CD45+ cells in the peripheral blood and harvest spleen and bone marrow.

**RECOMMENDATIONS:**

Mice are monitored 2-3 times per week as per the score sheet; noting weight, fur texture, posture, activity and presence of a palpable spleen.

Mice are monitored for engraftment of leukaemia into the peripheral blood from at least week 3 post injection of leukaemia. Once Human CD45+ cells are detected in the peripheral blood around 3-5% mice are monitored and scored daily

Human CD45+ cells above 10% of total CD45+ cells (mouse + human) in the peripheral blood are indicative of a heavy level of engraftment in the spleen. The average number of human leukaemia cells harvested from the spleen is  $200-300 \times 10^6$  cells. .

Mice are sacrificed when they have a cumulative clinical score of 4.

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**REVISED:**

#### REFERENCES

1. Lock RB, Liem N, Farnsworth ML, Milross CG, Xue C, Tajbakhsh M, Haber M, Norris MD, Marshall GM, Rice AM. The non-obese diabetic/severe combined immunodeficient (NOD/SCID) mouse model of childhood acute leukemia reveals intrinsic differences in biological characteristics at diagnosis and relapse. Blood, 2002, 99:4100-4108.