1. For experiments using animals for cancer research, the captioned Guidelines for the welfare and use of animals in cancer research\(^1\) must be followed to ensure minimal suffering of animals.

   a. Subcutaneous or intradermal tumour transplantation on the back or in the flank are considered to cause the least distress. Implantation of tumours in the footpad, tail, brain and eye will require special justification and is strongly discouraged.

   b. Tumour burden should not exceed 5% of the host animal’s normal body weight in case of animals being used for routine tumour passage, or 10% in animals involved in therapeutic experiments. This latter size, i.e. 10%, would typically represent a mean subcutaneous flank tumour diameter of 15mm in a mouse or 25mm in a rat. Animals implanted with two tumors or injected with a neoplastic cell line in more than one location, each tumor cannot exceed 12mm.

   c. For ascitic tumours, ascitic burden should not exceed 10% of normal body weight in mice and rats; and if tapping to collect monoclonal antibodies is performed, maximum number of tapping is 3 with the last tap as terminal procedure.

   d. For metastatic tumours, it may not be necessary to wait until the animals develop symptoms of impending morbidity, and the required information may be obtained after humane killing at an earlier stage. Special attention should be directed to detecting signs associated with clinically significant disease in sites particularly susceptible to metastasis, e.g. dyspnoea due to lung deposits.

   e. In tumour therapy experiments with adult rodents, weight loss should not normally exceed 20% of the host body weight at the start of the experiment;

   f. As a minimum, every tumour-bearing animal should be inspected daily and additional, more detailed, examination undertaken as appropriate;

   g. Where any one of the following signs is present in a single animal then the animal should be euthanized immediately: persistent anorexia or dehydration, consistent or rapid body weight loss of 20% maintained for 72 hours, unable to maintain upright position or to move, muscle dystrophy or emaciation, moribund, lethargy or failure to respond to stimuli, hypothermia, unconscious or comatose, blood stained or mucopurulent discharge from any orifice, laboured breathing accompanied by nasal discharge and/or cyanosis, enlarged lymph nodes and spleen, anaemia, ulcerated tumours or large tumours that interfere with normal movement, significant abdominal distension or where ascites burden exceeds 10% of the baseline bodyweight, incontinence or prolonged diarrhoea.

2. Strong scientific justification and CULATR approval must be provided should investigators need to exceed the stated endpoints in this policy.

3. Calipers or suitable imaging equipment should be used for quantitative analysis of tumor studies.

Reference: