Introduction: Cutaneous neoplasms are associated with increased angiogenesis and tissue perfusion, with consequent local temperature rise. The detection of these gradients through infrared thermography could be an aid in diagnosis, tumor grade and follow-up of disease progression.

Objective: evaluated the temperatures of the feline injection site sarcoma (FISS), obtained with the thermographic camera FLIR T650sc (Flir Systems®), correlating them with the histological grade and the patient's survival after surgery.

Results: 25 cats, with 17 females (68%) and 8 males (32%), mean age of 9.1 ±3.8 years, 4.8 kg ± 1.4.

Temperatures: Tumor area: 32.1 to 38.4°C (mean 35.5°C ± 1.5) X Healthy areas: 31.9 to 37.8°C (mean 34.9°C ± 1.6).

Most of the tumors (58%) showed to be warmer than the surrounding tissue (mean 1.5°C ± 0.9), while 31% showed to be colder (mean 0.7°C ± 0.6). Three tumors had the same temperature as the surrounding tissues.

Conclusion: There was no correlation between tumor temperature and histological grade (p = 0.42) and survival (p = 0.78) after surgery. Further investigation is necessary to determine the impact of this technique on the diagnosis and prognosis of FISS.