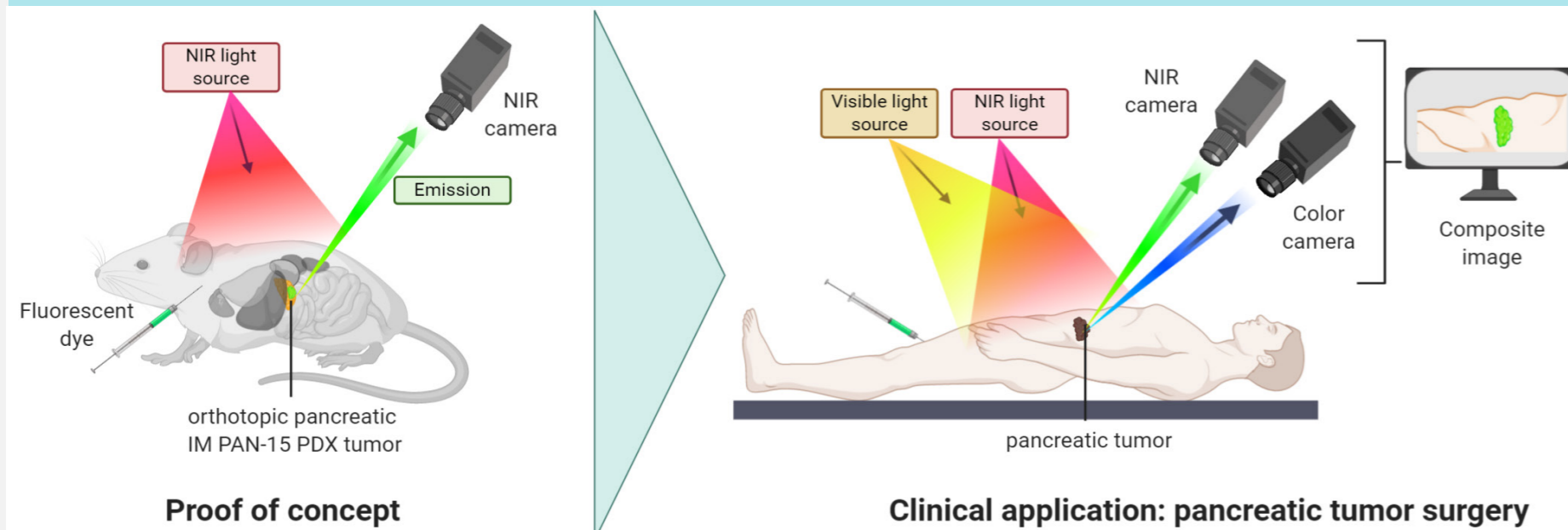


1 CONTEXT & OBJECTIVES

Fluorescent dyes have been used in medical diagnostics for over 50 years. The emergence of new fluorescent imaging technology in support of surgery and the need for increased sensitivity and precision have driven the search for novel fluorescent molecules.



Orthotopic patient-derived xenograft (PDX) pancreatic tumor models provide a closely related human tumor within organ-specific tumor microenvironment, which was well suited to the evaluation of the tissue specificity of two novel fluorescent compounds, developed by Proimaging, with specific tumor uptake.

AIMS OF THE STUDY

- ✓ To develop an orthotopic model of human PDX pancreatic tumor
- ✓ To evaluate the ability of the fluorescent dye to discriminate between the pancreas and the tumor
- ✓ To compare the novel compounds CJ215 and CJ319 (Proimaging) to indocyanine green (ICG) used in NIR fluorescent imaging

METHODS

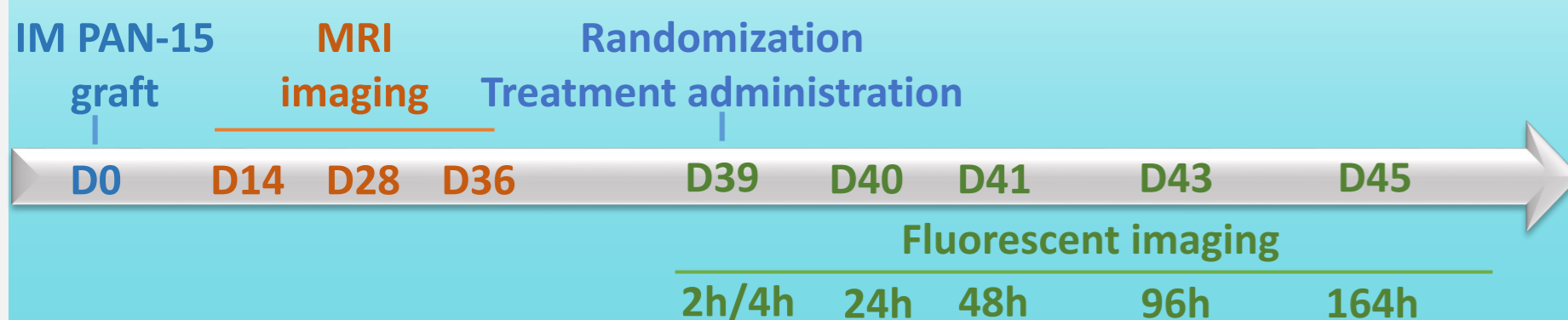
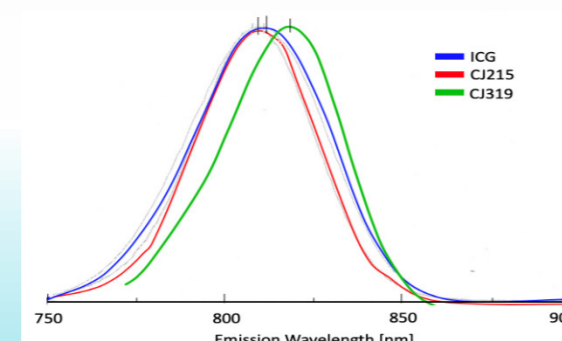
TUMOR MODEL

IM PAN-15
Human adenocarcinoma
On Balb/c-Nude

DYE

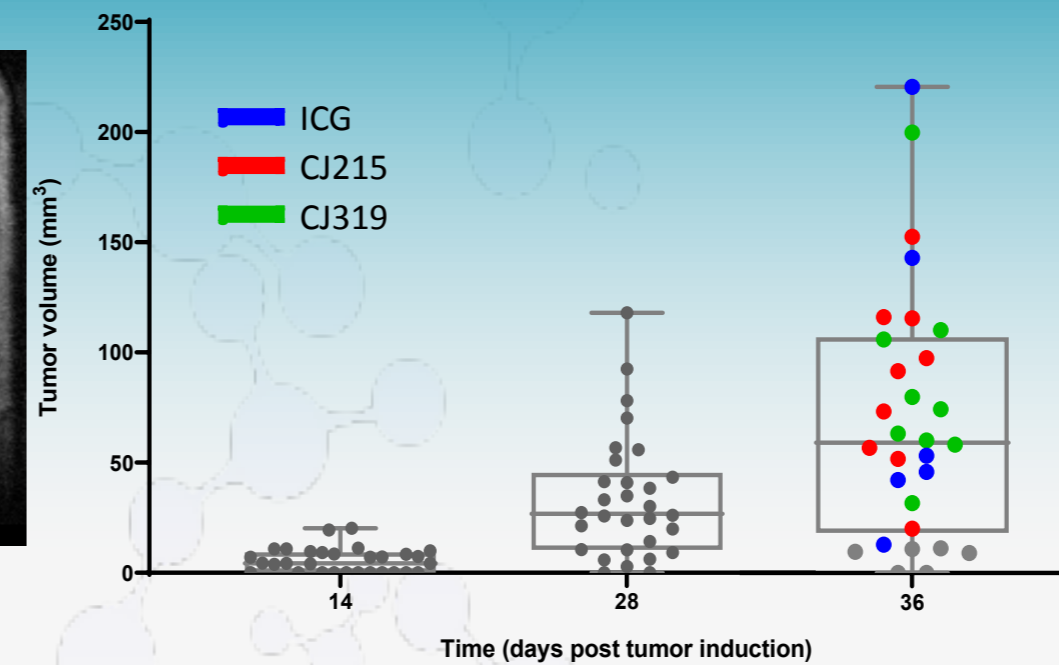
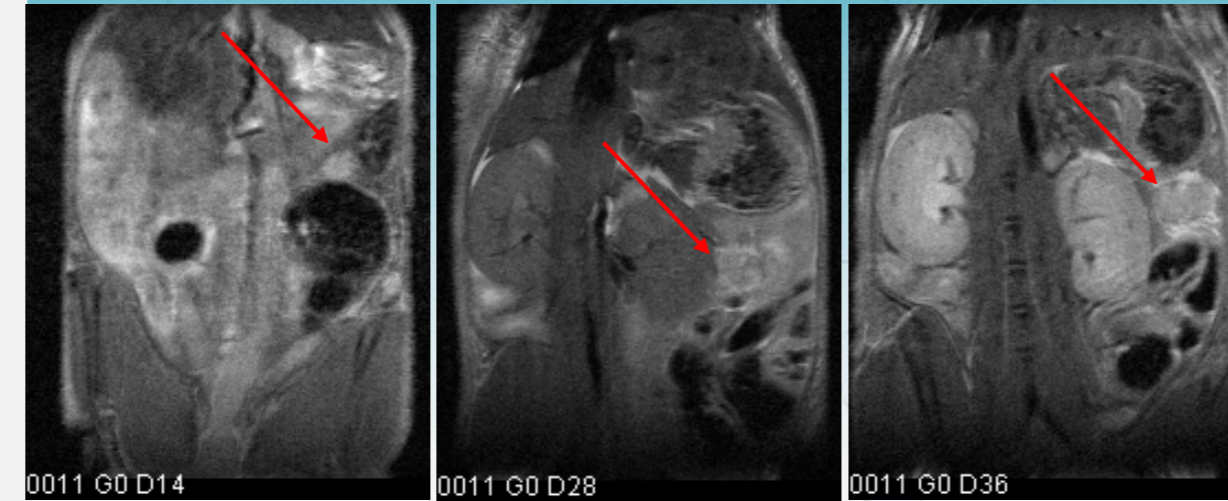
ICG 1.5 μmol/kg
CJ215 1.5 μmol/kg
CJ319 1.5 μmol/kg

DOSE

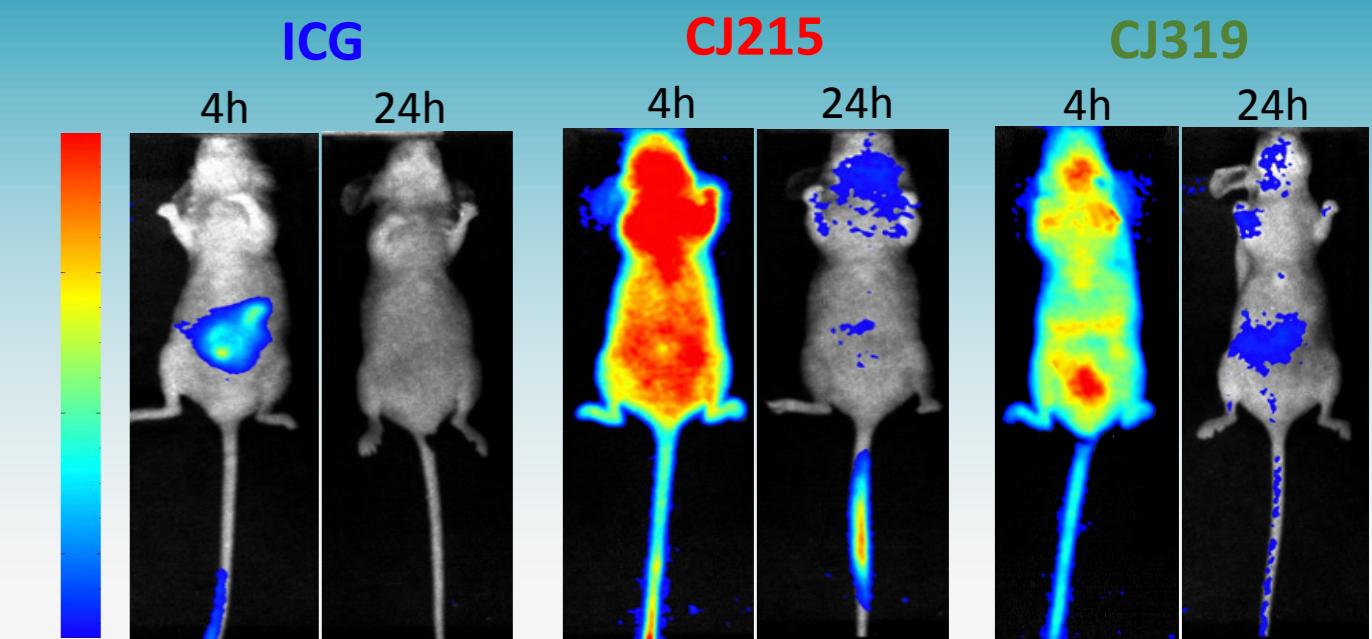


2 RESULTS

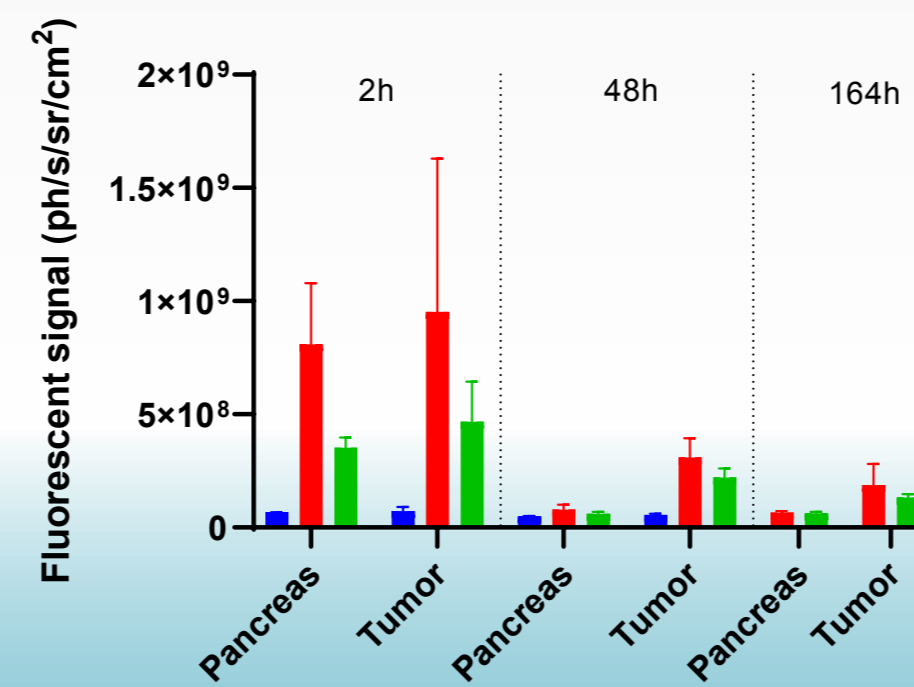
MRI images and individual tumor volumes of pre-randomized mice bearing IM-PAN-15 tumor



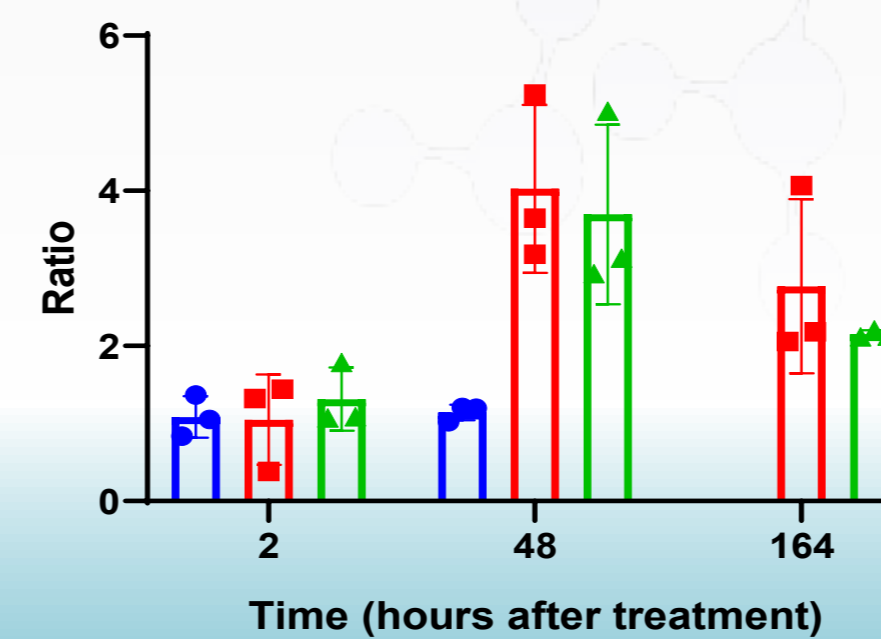
In vivo fluorescent images



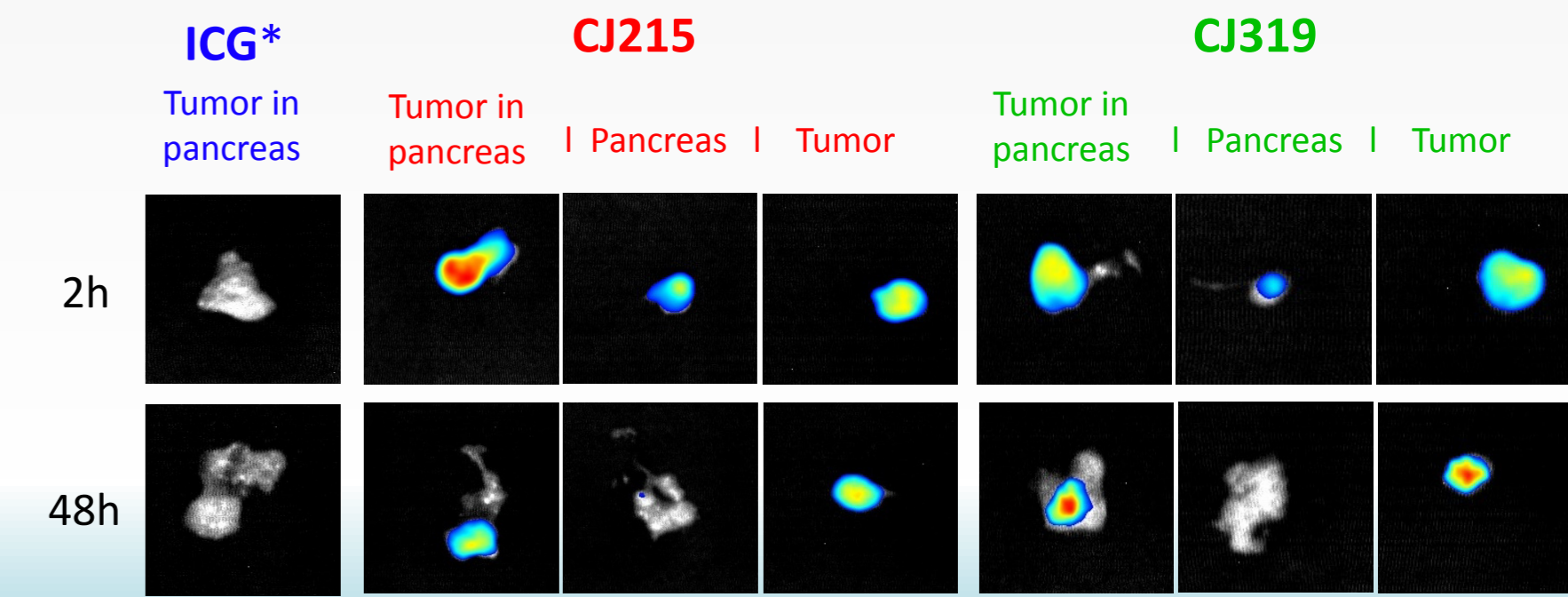
Quantification of fluorescent signal from the pancreas and tumors



Ratio of the tumor/pancreas fluorescent signal



Ex vivo fluorescent images



*ICG showed no specific accumulation in pancreas or tumor at 2h and is eliminated at 48h

- ✓ Ex vivo imaging after 2h showed that CJ215 and CJ319 were present in the pancreas and tumor
- ✓ A preferential distribution for the tumor was observed, with a four-fold higher fluorescent signal in the tumor than in the surround pancreatic tissue

3 CONCLUSION

- ✓ A patient-derived orthotopic pancreatic tumor model was developed and its use in the investigation of tissue specificity of two novel fluorescent compounds is clinically relevant
- ✓ Preferential pancreatic tumor distribution of CJ215 and CJ319 is observed and persisted six days after injection, although the signal decreased over time
- ✓ In comparison, ICG, a dye used in medical diagnostics, showed no specific accumulation in either the pancreas or tumor