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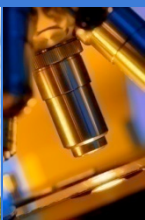
nPOD Human Pancreas

T1D vs Non-diabetic controls



Hypothesis

- PDGs around large ducts harbor a stem cell niche
- When beta cells destroyed in T1D, stem cells increase replication in an effort to repopulate the beta cell pool
- This increase in replication will be most apparent in the head and body of pancreas vs the tail



Methods

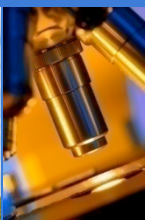
- Pancreas from head, body and tail
- Stained for Ki67 (brown), Insulin (pink), Alcian blue
- Quantitate total # of cells (and # Ki67 or Ins +):

Large ducts

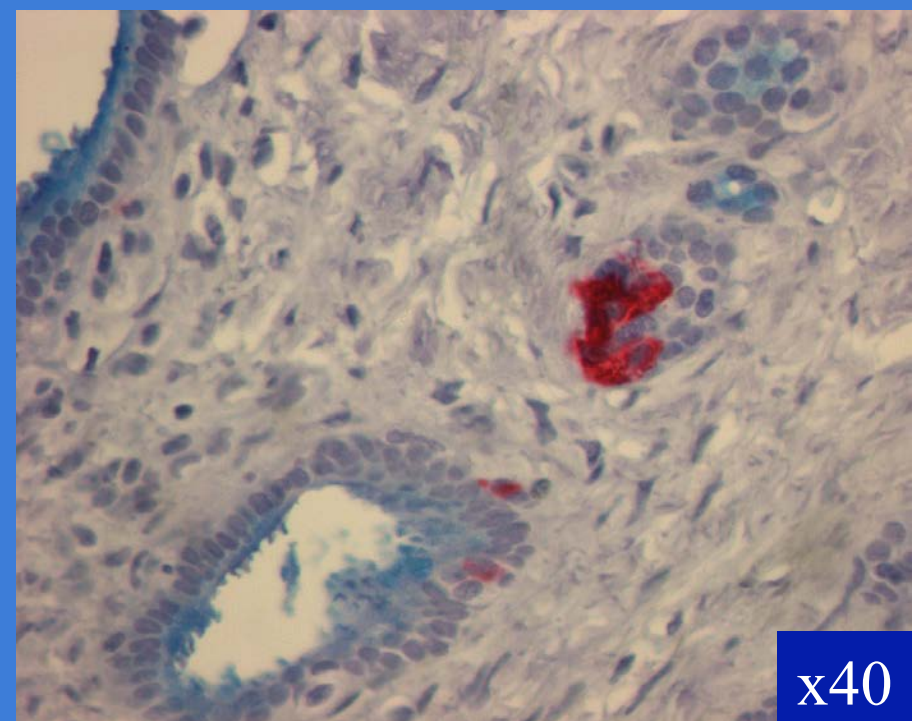
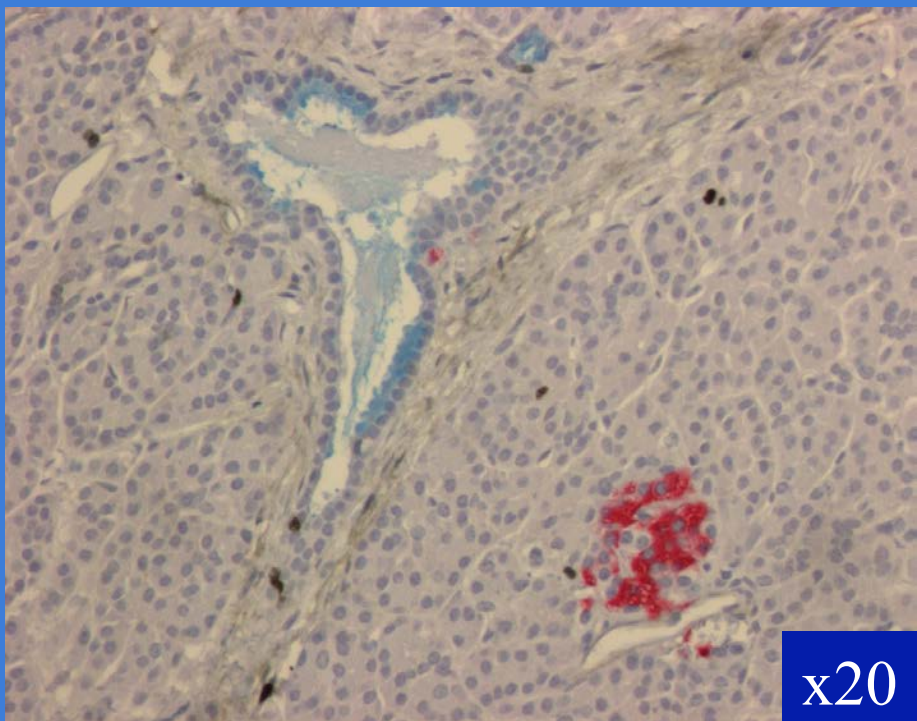
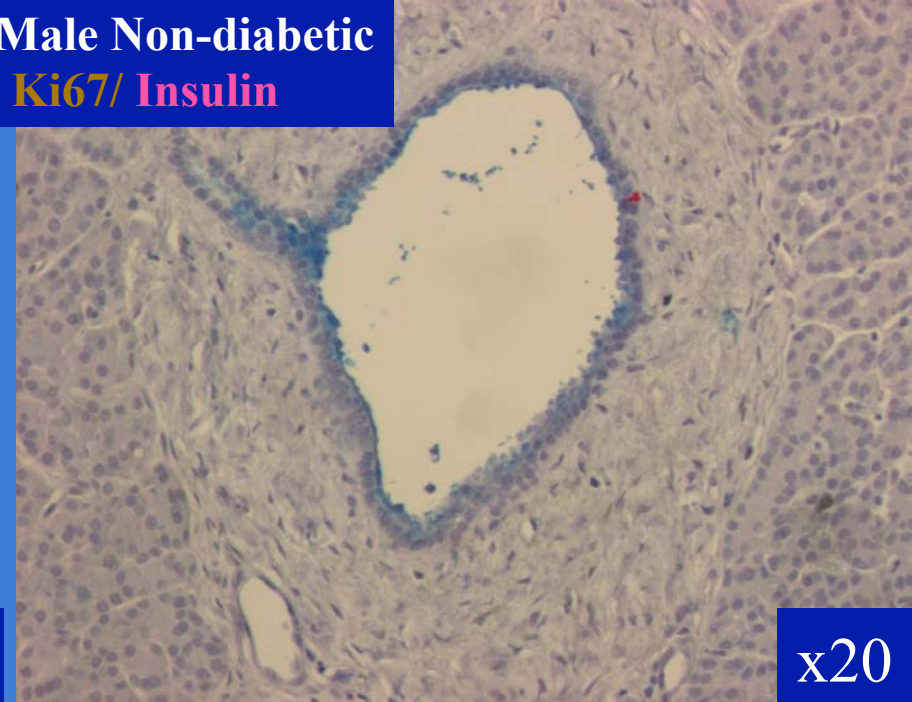
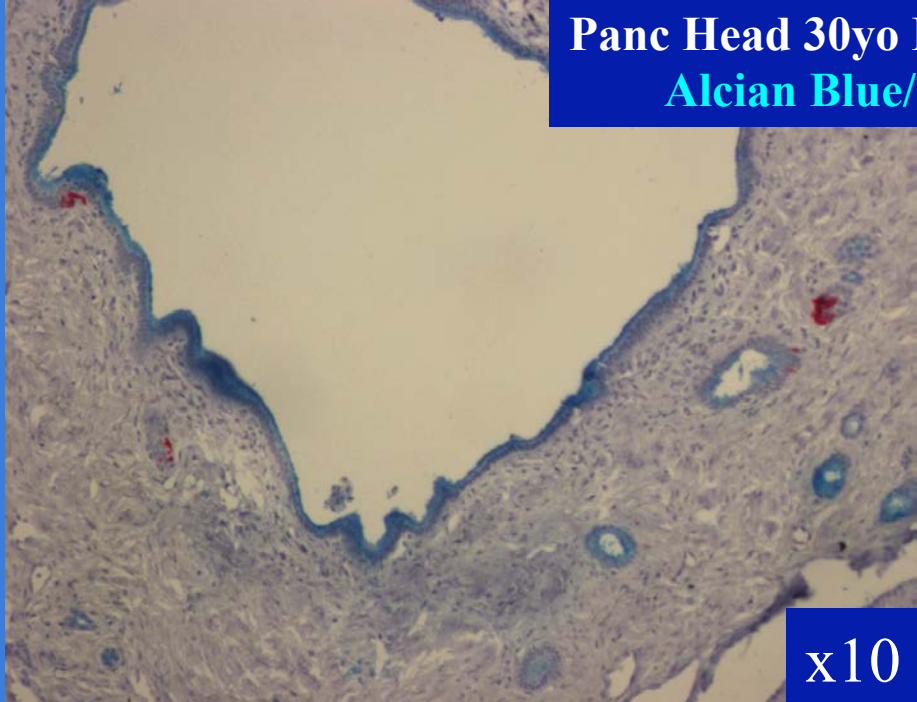
PDGs

Small ducts

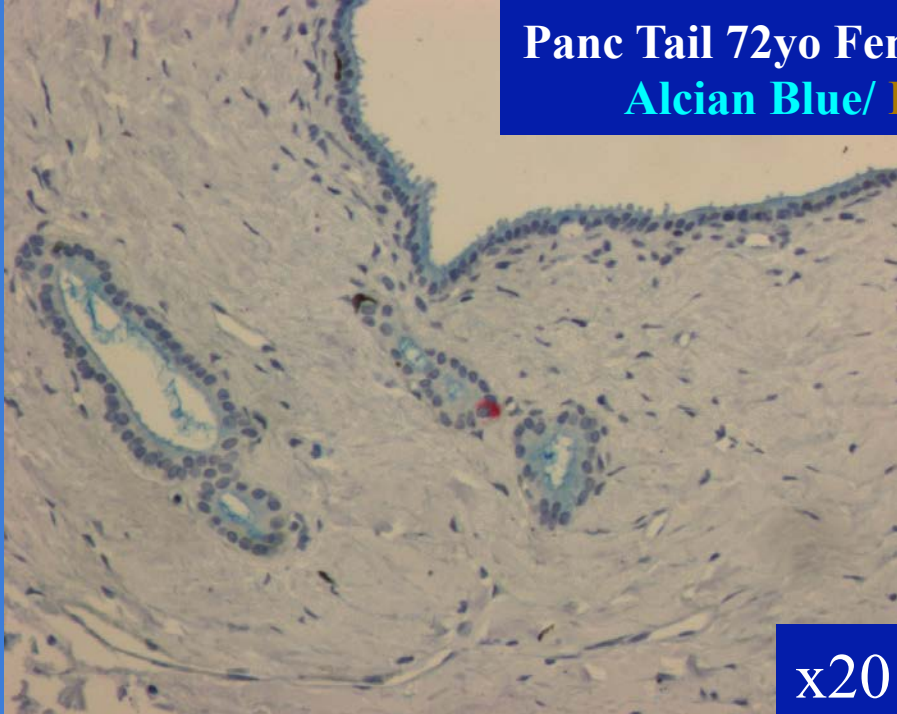
> 600,000 cells counted so far



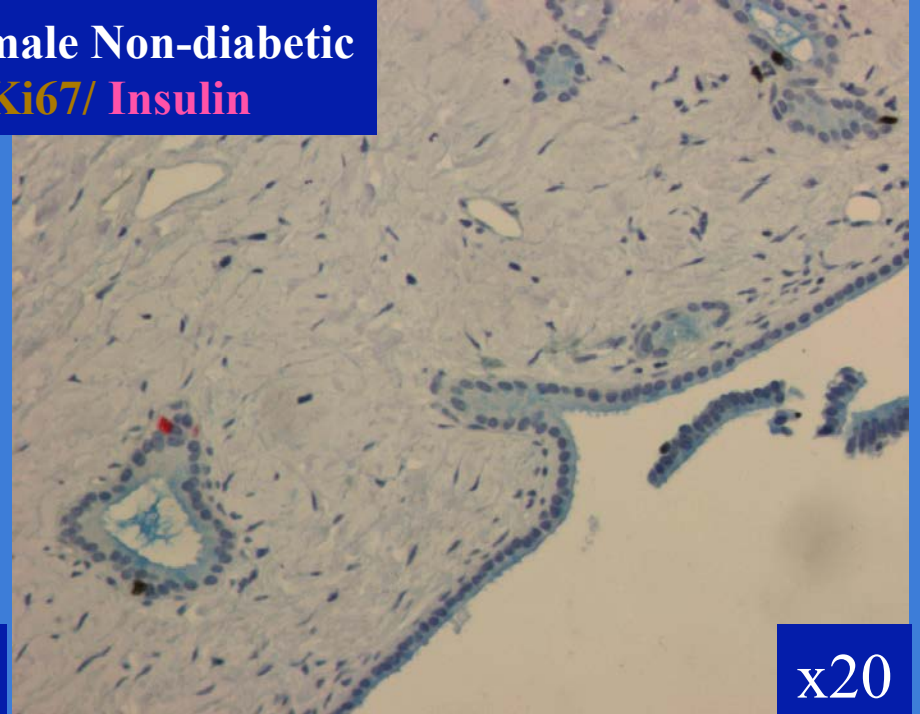
Panc Head 30yo Male Non-diabetic
Alcian Blue/ Ki67/ Insulin



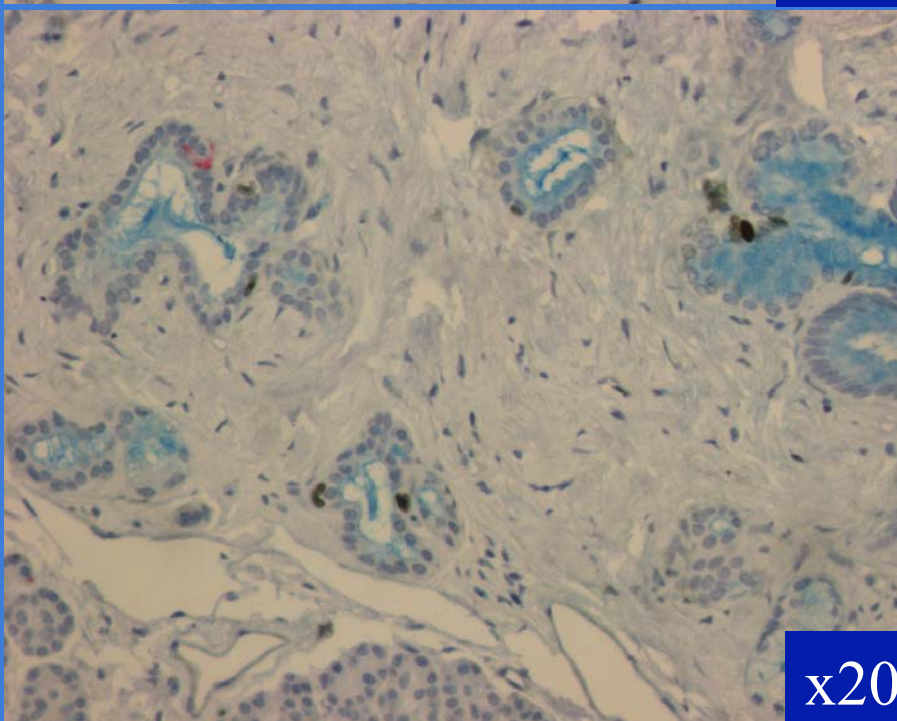
Panc Tail 72yo Female Non-diabetic
Alcian Blue/ Ki67/ Insulin



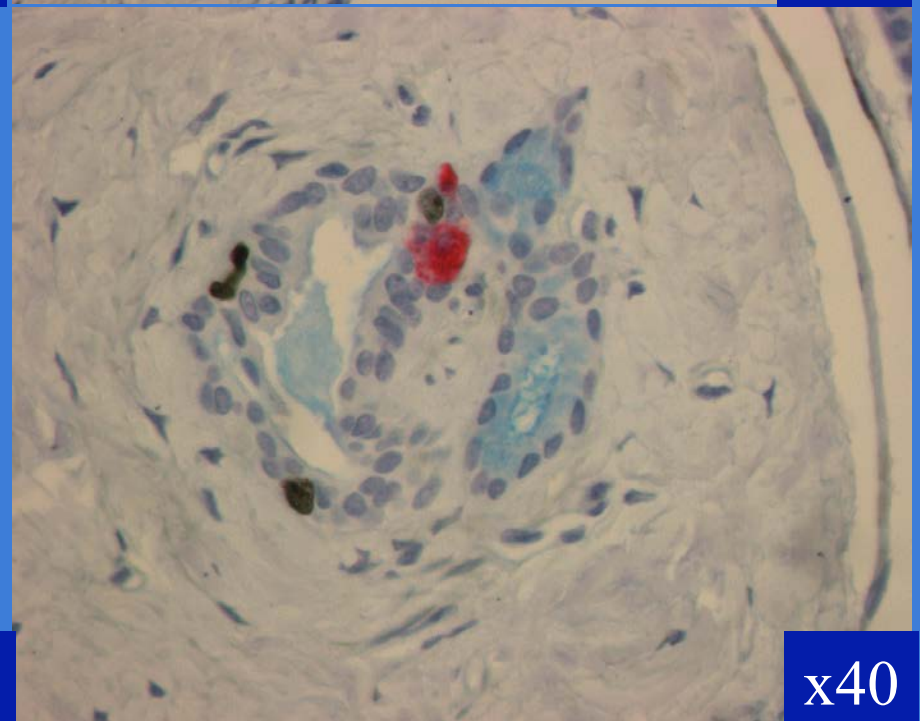
x20



x20

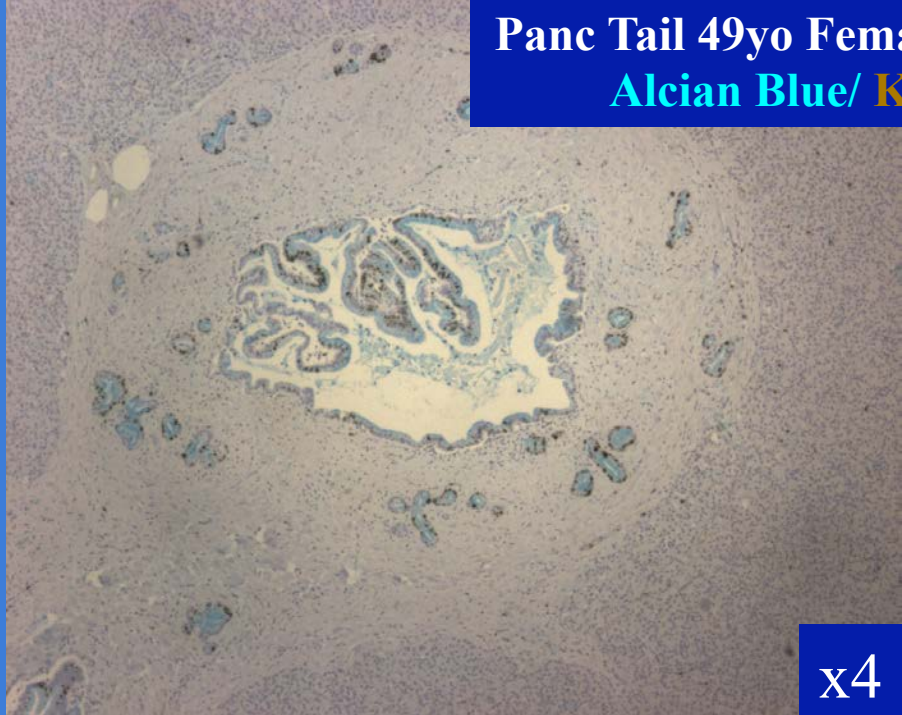


x20

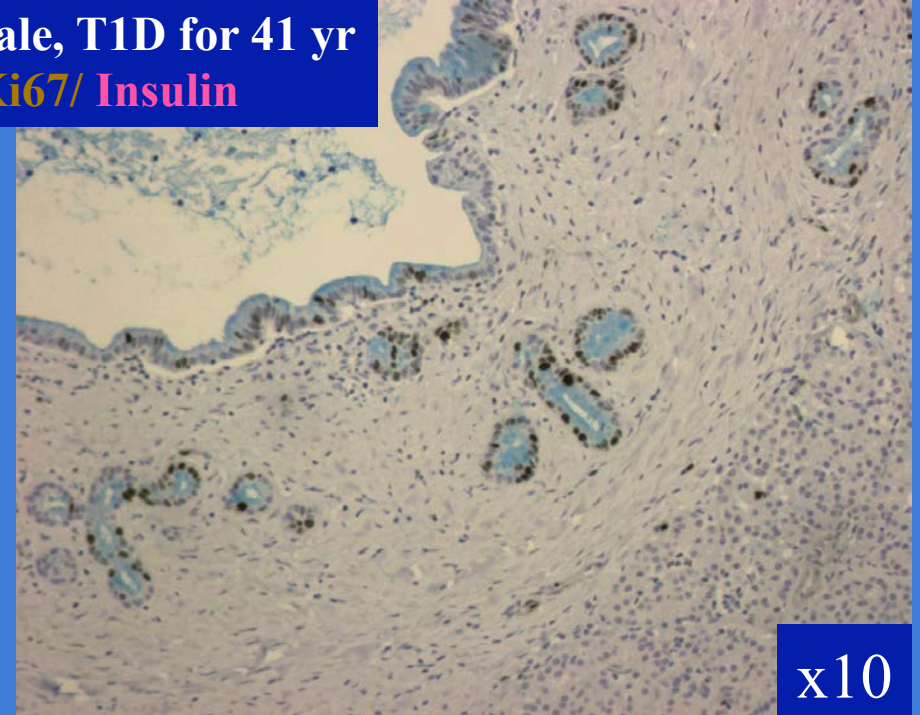


x40

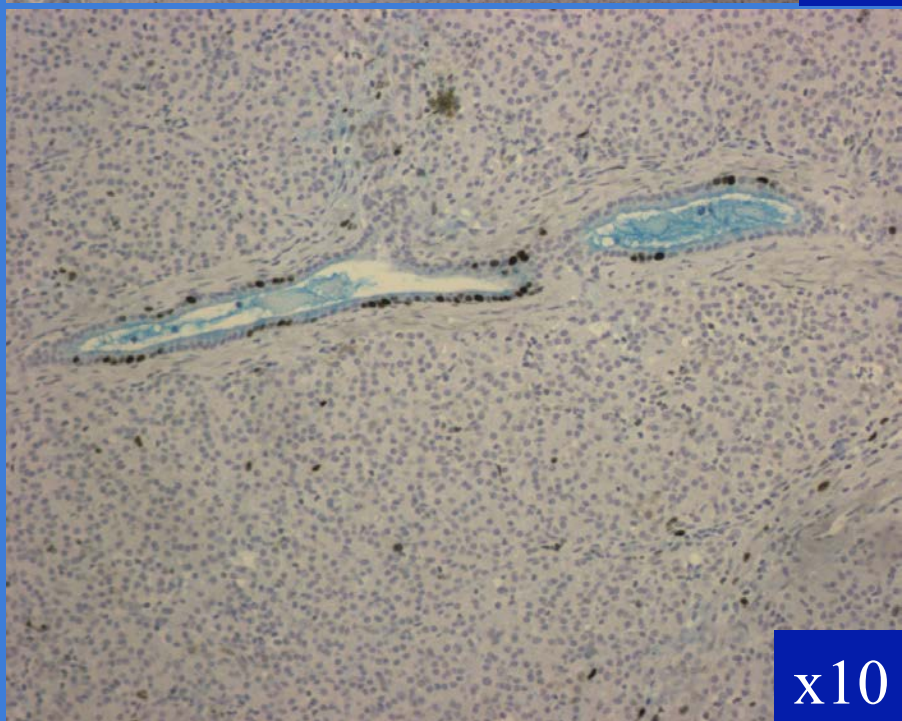
Panc Tail 49yo Female, T1D for 41 yr
Alcian Blue/ Ki67/ Insulin



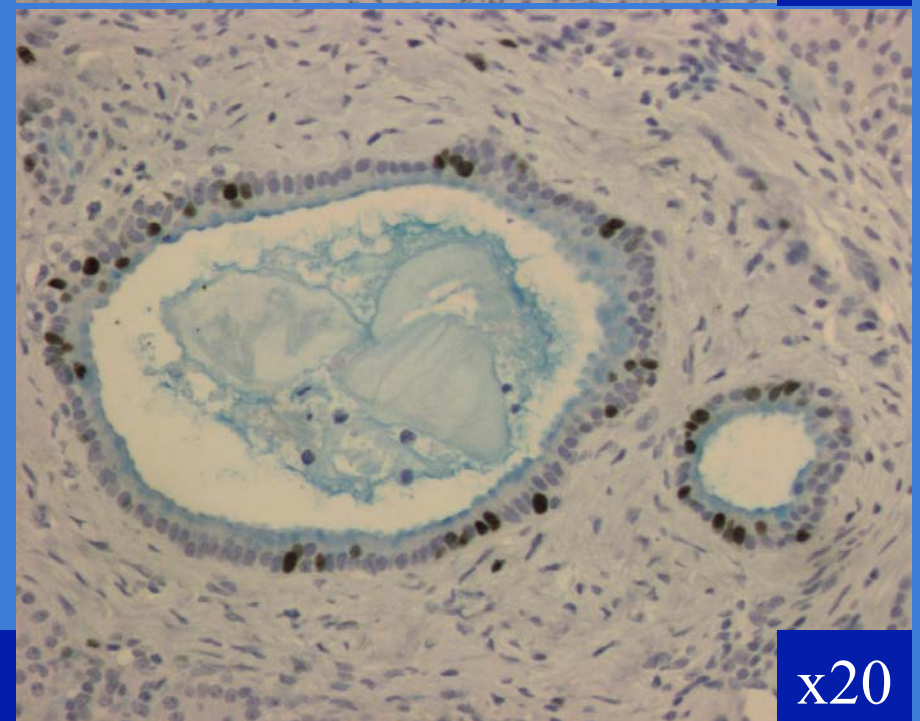
x4



x10



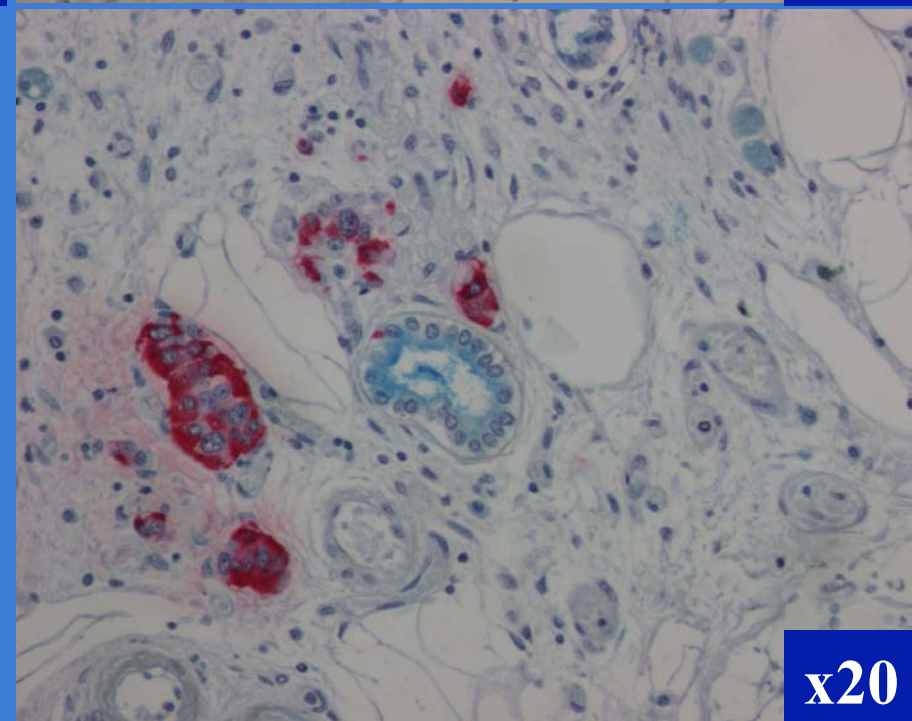
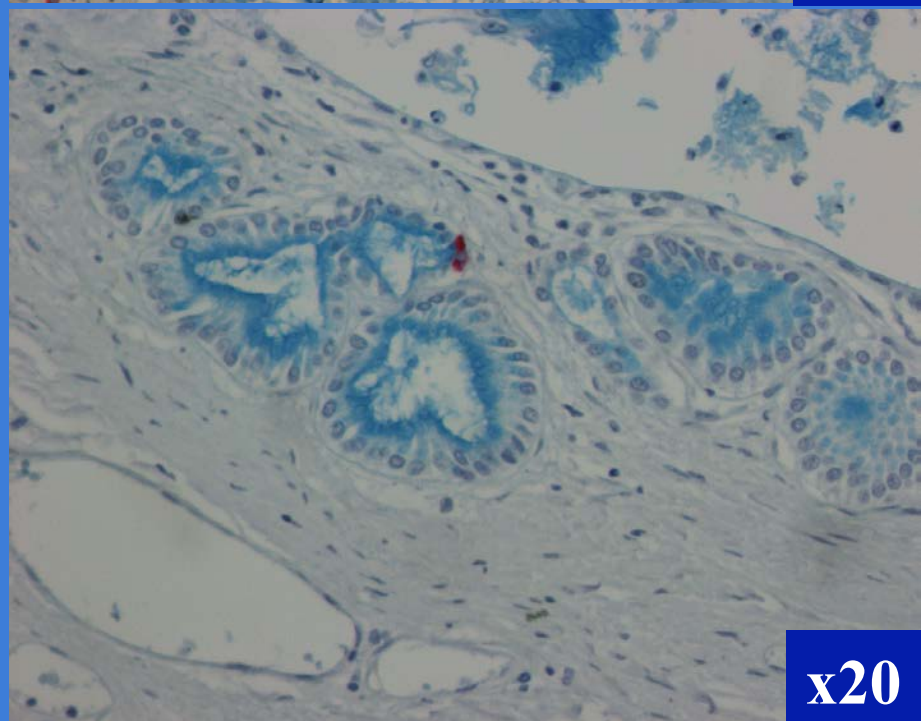
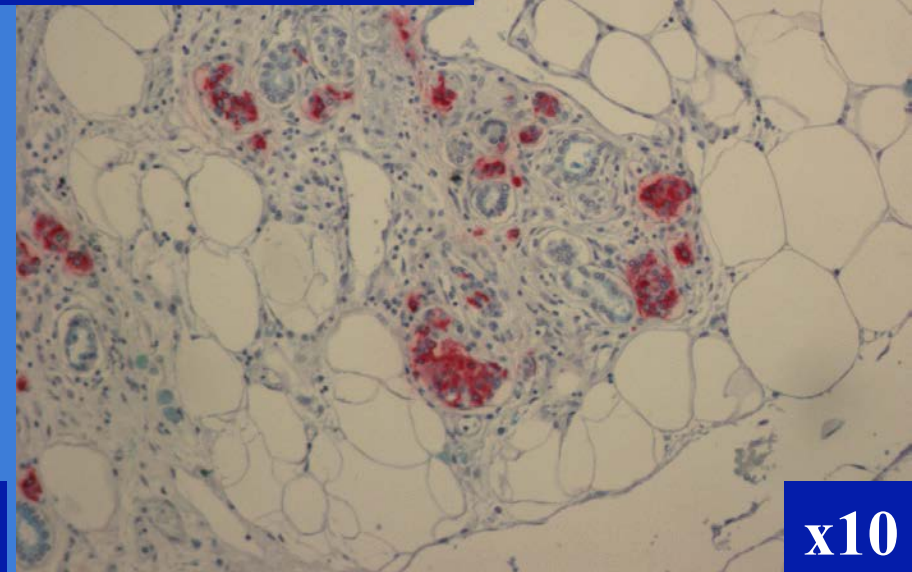
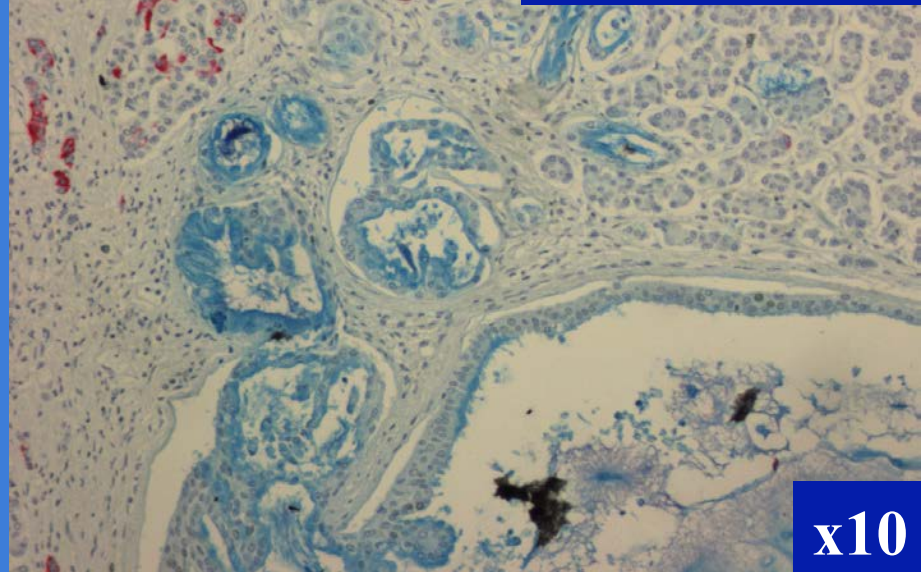
x10



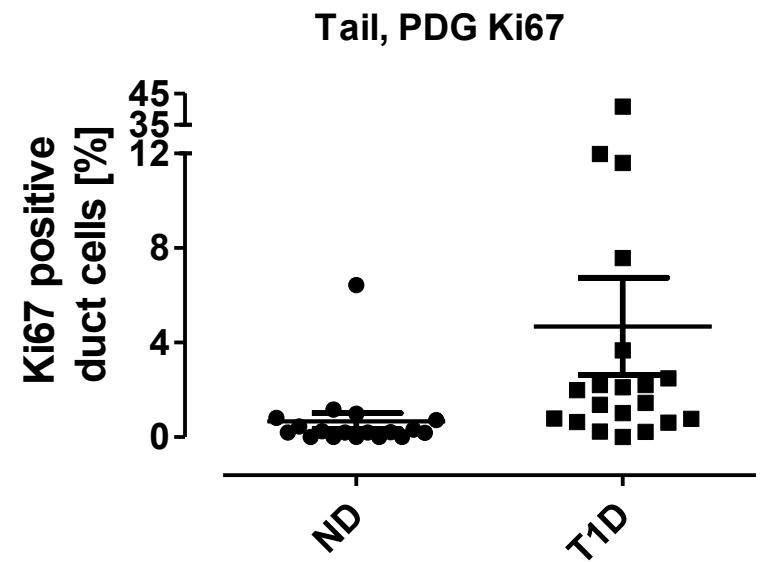
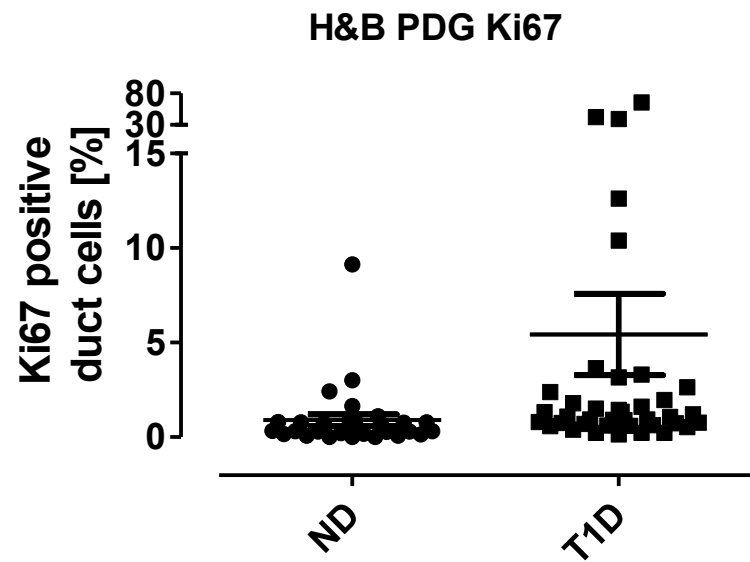
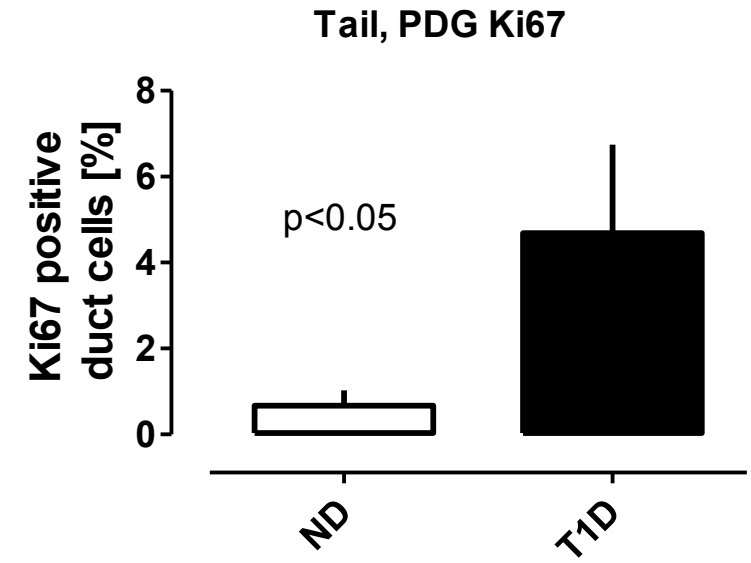
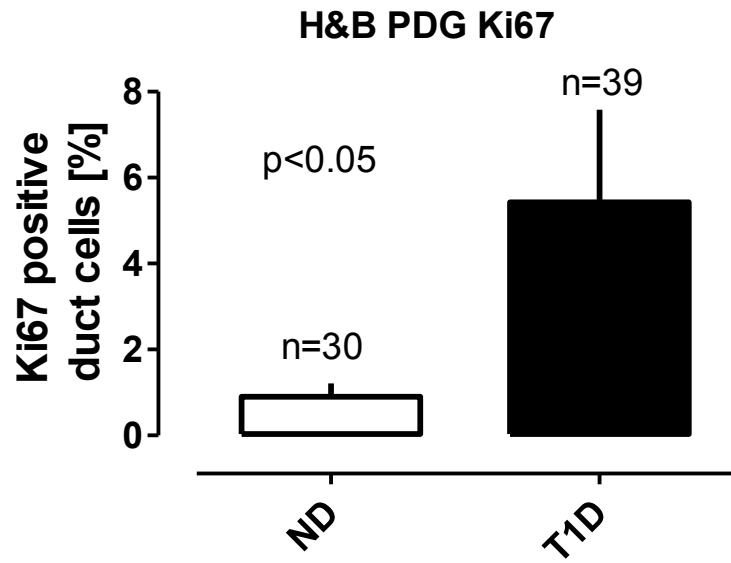
x20

Panc Head 88yo Male, T1D for 58 yr

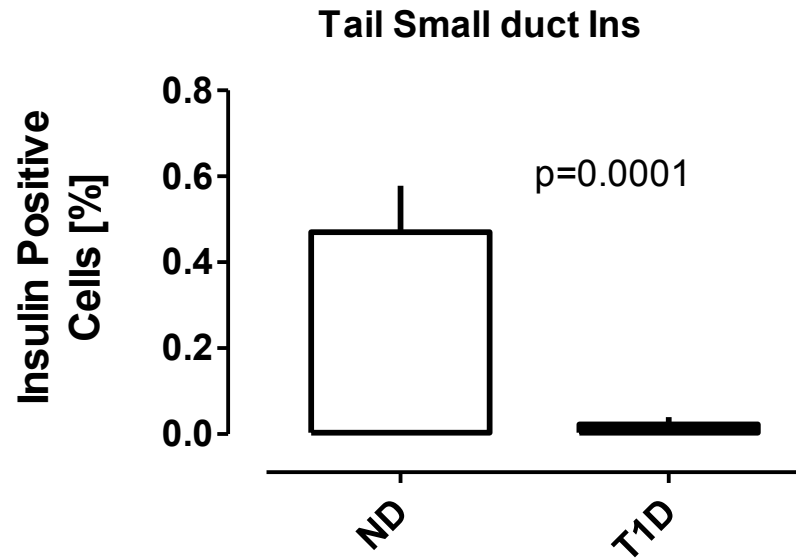
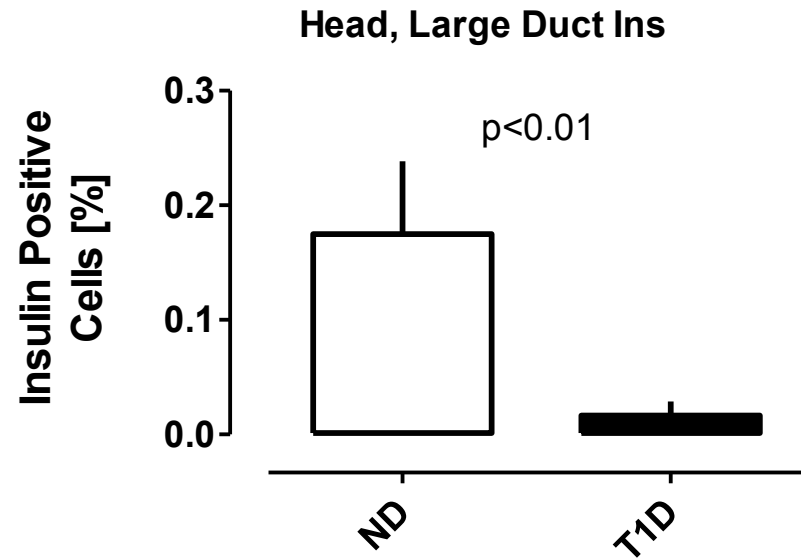
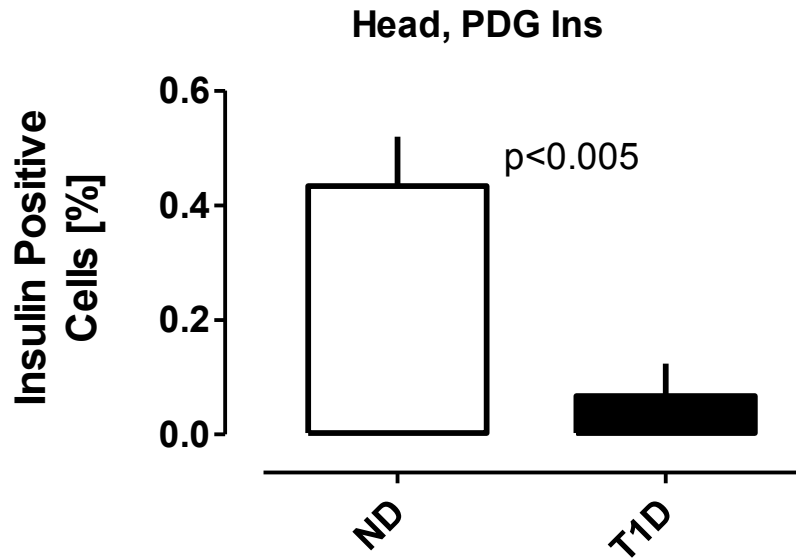
Alcian Blue/ Ki67/ Insulin



Ki67 in PDG Epithelium



Insulin Staining



Conclusion

- PDG compartment may serve as a stem cell compartment in human pancreas

