Piglet Dataset Description

CT images of a deceased piglet were scanned from a 64-slice multi-detector CT scanner (Discovery CT750 HD, GE Healthcare) using 100kV and 0.625mm slice thickness. A series of tube currents were used in the scanning to produce images with different dose levels. The 300mA s is served as the standard conventional dose whereas the others are served as LDCTs with tube current reduction of 50 %, 25 %, 10 % and 5 % respectively. The effective dose was calculated by the formula: $K \times DLP$ where K is a conversion coefficient for the anatomic region examined and DLP is the recorded dose-length product. K was set to be 0.017, which was the average of the abdomen and pelvis. Detailed scanning protocol can be found in Table 1. The dicom info of each experiment is listed in Table 2

	Normal Dose 100%	Dose Reduction 50%	Dose Reduction 25%	Dose Reduction 10%	Dose Reduction 5%
Gantry Rotation time (s)			1		
Slice Thickness (mm)			0.625		
Tube potential (kV)			100		
Tube Current (mA s)	300	150	75	30	15
$CTDI_{vol}$(mGy)	30.83	15.41	7.71	3.08	1.54
DLP (mGy-cm)	943.24	471.62	235.81	94.32	47.16
Effective Dose(mSv)	14.14	7.07	3.54	1.41	0.71

Table 1: CT scan protocol for the experiment.

Experiment	Dose+Recon
SE0	100% DOSE 20% ASIR
SE1	100% DOSE 40% ASIR
SE2	100% DOSE 60% ASIR
SE4	100% DOSE FBP
SE8	100% DOSE MBIR
SE9	50% DOSE FBP
SE10	50% DOSE 60% ASIR
SE11	50% DOSE MBIR
SE12	50% DOSE 20% ASIR
SE13	50% DOSE 40% ASIR
SE14	25% DOSE FBP
SE15	25% DOSE 20% ASIR
SE16	25% DOSE 40% ASIR
SE17	25% DOSE 60% ASIR
SE18	25% DOSE MBIR
SE19	10% DOSE FBP
SE20	10% DOSE 20% ASIR
SE21	10% DOSE 40% ASIR
SE22	10% DOSE 60% ASIR
SE23	10% DOSE MBIR
SE24	5% DOSE FBP
SE25	5% DOSE 20% ASIR
SE26	5% DOSE 40% ASIR
SE27	5% DOSE 60% ASIR
SE28	5% DOSE MBIR

Table 2: Description of each experiment.