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OnlineCT

for assessment of meat quality

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CT for the factory floor

Two applications: Sorting of pig middles
Assessment of beef marbling

Developed prototype

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$$I = I_0 e^{-\mu d}$$

Volume details:

- ✓ 3D geometry
- ✓ Tissue density

Volume analysis: Morphology vs. Density

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Global parameters

- Avg density
- LM Position
- Mixed pixels

Local parameters

- Shape
- Thickness

Geometry information – subcutaneous fat layer

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- 19 middles
- Medical reference
- Two operators
- Manually
- 144m/hour
- Remove outlier

Adapted reconstruction – no outliers

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SD_1=1.6mm

SD_2=0.7mm

Automated image analysis – ongoing experiment

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Visual assessment using medical CT

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7 Danish striploins

<u>Subjective</u> assessment of US marbling

from (N_1) trimmed 30mm steaks (ref)

from (N_2) 2mm CT images

Subjective assessment using medical CT

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0.8mm pixel size

X-rays in a production environment

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<u>Challenges:</u> Installation cost
Operational cost

<u>Solution:</u> Continuous cooling
Closed X-ray cabinet
< 5µSv/h
2 years tube life expectancy

Wrap up and Questions

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Fat cover

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Trackable

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Tracking in space

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