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Automatic delineation of brain regions on MRI and PET images from the pig

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Highlights (old highlights, new version below)

- A PET atlas of the domestic pig brain was constructed using MRI as reference
- Spatial normalization and delineation of brain regions on new PET scans was automated
- Only requires a perfusion-weighted image of the dynamic PET scan, no MRI required
- Applicable for radiotracers having different brain kinetics and spatial distributions
- Eliminates operator-dependent variation and increases accuracy and reproducibility

Highlights

- Construction of a multimodality brain atlas for the domestic pig
- Automatized spatial normalization and delineation of brain regions on new PET scans
- The method uses a perfusion-weighted image of the dynamic PET scan
- Validated across radiotracers with different brain kinetics and spatial distributions
- Freely available to standardize pig PET image quantification