NaF PROSTATE

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Summary

This is a collection of F-18 NaF positron emission tomography/computed tomography (PET/CT) images in patients with prostate cancer, with suspected or known bone involvement.

Imaging was performed on a Phillips Gemini TF PET/CT scanner based on 4x4x22mm LYSO (lutetium yttrium orthosilicate) crystal detection elements covering 18cm axial field of view (FOV) and 57cm imaging transaxial FOV. The time of flight resolution is 585ps. The scanner achieves a spatial resolution of 4.8mm at the center of the FOV. Data were reconstructed using the RAMLA iterative OSEM algorithm using 3 iterations and 33 subsets. The scanner uses CT based attenuation correction, along with randoms, normalization, dead time, and a model based scatter correction. The CT component of the scanner is a 16 slice helical CT. The CT images were generated using a low X-ray dose of 120KV, 60mAs setting.

The prescribed injected dose was 3mCi IV. Some of the patients had 2 baseline studies within 14 days of each other (with no intervening interventions). Many have follow-up PET/CT imaging performed following therapy (varied) at 6 +/- 2months and 12 +/- 2 months. For scientific or other inquiries relating to this data set, please contact the TCIA Helpdesk.

Data Access

Data Access

Data Type	Download all or Query/Filter	License
Images (12.9 GB)	*Download* *Search* (Download requires the NBIA Data Retriever)	CC BY 3.0
DICOM Metadata Digest (CSV, 42 kB)	*Download*	CC BY 3.0

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Additional Resources for this Dataset

The NCI Cancer Research Data Commons (CRDC) provides access to additional data and a cloud-based data science infrastructure that connects data sets with analytics tools to allow users to share, integrate, analyze, and visualize cancer research data.

- Imaging Data Commons (IDC) (Imaging Data)

Detailed Description

Detailed Description

Collection Statistics	Updated 4/23/2013
Modalities	PET/CT
Number of Participants	9
Number of Studies	44
Number of Series	214
Number of Images	64,535

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Image Size (GB)	12.9

Citations & Data Usage Policy

Citations & Data Usage Policy

Users must abide by the TCIA Data Usage Policy and Restrictions. Attribution should include references to the following citations:

Data Citation

Kurdziel, Karen A, Apolo, Andrea B., Lindenberg, Liza, Mena, Esther, McKinney, Yolanda Y., Adler, Stephen S., … Choyke, Peter L. (2015). **Data From NaF PROSTATE [Dataset]**. The Cancer Imaging Archive. https://doi.org/10.7937/K9/TCIA.2015.ISOQTHKO

Publication Citation

Kurdziel, K. A., Shih, J. H., Apolo, A. B., Lindenberg, L., Mena, E., McKinney, Y. Y., … Choyke, P. L. (2012, June 22). The Kinetics and Reproducibility of 18F-Sodium Fluoride for Oncology Using Current PET Camera Technology. Journal of Nuclear Medicine. Society of Nuclear Medicine. https://doi.org/10.2967/jnumed.111.100883

TCIA Citation

Clark, K., Vendt, B., Smith, K., Freymann, J., Kirby, J., Koppel, P., Moore, S., Phillips, S., Maffitt, D., Pringle, M., Tarbox, L., & Prior, F. (2013). **The Cancer Imaging Archive (TCIA): Maintaining and Operating a Public Information Repository**. In Journal of Digital Imaging (Vol. 26, Issue 6, pp. 1045–1057). Springer Science and Business Media LLC. https://doi.org/10.1007/s10278-013-9622-7

Other Publications Using This Data

TCIA maintains a list of publications that leverage our data. If you have a publication you'd like to add, please contact the TCIA Helpdesk. Some publications that have used this dataset as a resource include:

1. Brassey, C. A., O'Mahoney, T. G., Chamberlain, A. T., & Sellers, W. I. (2018). A volumetric technique for fossil body mass estimation applied to Australopithecus afarensis. Journal of human evolution, 115, 47-64. doi: https://doi.org/10.1016/j.jhevol.2017.07.014
2. Chen, J., Li, Y., Du, Y., & Frey, E. C. (2020). Generating anthropomorphic phantoms using fully unsupervised deformable image registration with convolutional neural networks. Med Phys, 47(12), 6366-6380. doi: https://doi.org/10.1002/mp.14545
3. Trebeschi, S., Bodalal, Z., van Dijk, N., Boellaard, T. N., Apfaltrer, P., Tareco Bucho, T. M., . . . Beets-Tan, R. G. H. (2021). Development of a Prognostic AI-Monitor for Metastatic Urothelial Cancer Patients Receiving Immunotherapy. Front Oncol, 11, 637804. doi: https://doi.org/10.3389/fonc.2021.637804

Versions

Version 1 (Current): Updated 2013/4/23

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