

CASE STUDY · ONCOLOGY

International Phase II Non-Hodgkin Lymphoma Trial With PET/CT and PET/MRI

International Phase II · FDG PET/CT, PET/MRI · Lugano classification and Deauville score

Challenge

An international Phase II trial assessed a new treatment for non-Hodgkin lymphoma using FDG PET combined with CT or, at some sites, MRI. Metabolic response assessment under the Lugano classification depends on Deauville scoring relative to mediastinal and liver uptake, which varies with uptake time, glucose level and reconstruction, and the inclusion of PET/MRI alongside PET/CT introduced a second hybrid modality with different attenuation correction and anatomical reference.

The sponsor needed consistent Deauville scoring and Lugano response classification across both modalities and all sites, with documented handling of the cases where PET and anatomical findings disagreed.

Intrinsic Imaging's Solution

Intrinsic Imaging developed the protocol imaging section and charter with quantitative PET acquisition requirements for both PET/CT and PET/MRI, including fasting, uptake time and reconstruction, and qualified each site's hybrid system. Sites were trained on the protocol and on complete submission of anatomical and metabolic series.

Nuclear medicine and oncology radiologists performed blinded independent reads applying Deauville scoring and Lugano response classification, with the charter defining reference region placement, the handling of residual masses with low uptake, and the reconciliation of metabolic and anatomical findings. Discordant Deauville scores affecting the response category were adjudicated.

Image transfer, blinding and processing were centralized, with uptake-time compliance verified at receipt, and the response dataset was delivered with modality identified for each timepoint.

Intrinsic Imaging's Results

- Approximately 95 patients at 21 sites in 8 countries assessed under blinded Deauville and Lugano double reads with adjudication
- Quantitative PET protocol applied across PET/CT and PET/MRI with uptake-time compliance above 90%
- Discordant Deauville scores affecting response category resolved by adjudication in roughly 12% of timepoints with documented rationale
- Metabolic and anatomical findings reconciled under charter rules with modality recorded for every assessment

Read the full study online: <https://intrinsicimaging.com/case-studies/oncology-nhl-pet-phase-ii>

About Intrinsic Imaging, LLC

Intrinsic Imaging is an ISO certified medical imaging CRO and imaging core lab providing comprehensive services in support of Phase I-IV clinical trials and Class I, II, III medical device trials. Intrinsic Imaging is also a world leader in conducting Artificial Intelligence studies. With its team of more than 750 board-certified and fellowship-trained physicians, Intrinsic Imaging's team has sub-specialization in all therapeutic areas, including Cardiovascular, Central Nervous System, Gastroenterology, Musculoskeletal, Oncology and Ophthalmology. Certified by the British Standards Institution (BSI), Intrinsic Imaging is the only company in the world to hold five ISO certifications specifically for providing imaging core lab services on clinical trials. For more information, please visit www.IntrinsicImaging.com.

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