

Bone marrow biopsy is no longer needed as a part of the diagnostic work-up of CNS lymphoma of DLBCL origin: Danish population-based retrospective study in the PET-CT era

Jelena Jelacic, Dennis Lund Hansen, Sarah Sand Carlsen, Michael Thorsgaard, Ditte Hersby, Karina Kannik, Amalie Sofie Eilsø Munksgaard, Thomas Stauffer Larsen, Karen Juul-Jensen

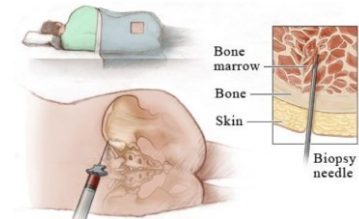
Department of Hematology, Odense University Hospital; Vejle Hospital; Zealand University Hospital, Roskilde; Aarhus University Hospital; Copenhagen University Hospital, Rigshospitalet; Aalborg University Hospital; Department of Clinical Research, University of Southern Denmark, Odense

Introduction

- Primary central nervous system (CNS) lymphoma (PCNSL): rare and aggressive disease; 7% of all malignant primary brain tumors; 4-6% of extranodal lymphomas ^{1,2}.
- More than 90% of the PCNSL are diffuse large B-cell lymphomas (DLBCL).

- **The International PCNSL Collaborative Group work-up³:**

- Contrast-enhanced MRI of the brain/spine
- CT scans/ and optional FDG-PET
- Bone marrow biopsy (BMB)
- UL of testes, CSF evaluation



Aim: To examine the value of BMB in patients with DLBCL and PCNSL in the PET-CT era.

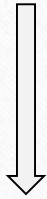
¹ Grommes et al. *Neuro Oncol.* 2019;21(3):296-305

² Margold et al. *Neuro Oncol.* 2021;23(12):2076-2084.

³ Abrey et al. *J Clin Oncol.* 2005;23(22):5034-5043.

Methods and Results

N= 1238 Identified in PatoBank



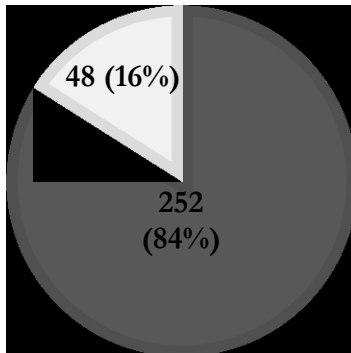
N=442 Missing PET-CT and/or BMB
N=232 Non-DLBCL histology
N=118 Systemic disease on PET-CT scans
N=145 Other

Inclusion criteria:

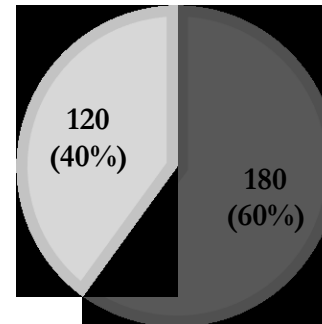
- Patients diagnosed with DLBCL in CNS between 2002 and 2020
- Available BMB and PET-CT
- No signs of systemic lymphoma on PET-CT
- Inclusion of isolated relapse of DLBCL in PCNSL

Patients with CNS lymphoma and PET-CT without lymphoma outside of the CNS (N=300)

■ PCNSL □ isolated relapse of DLBCL in CNS



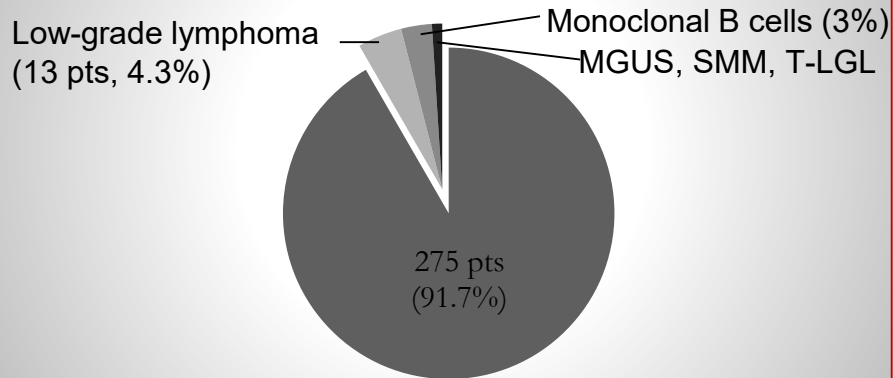
■ Male □ Female



Median age: 68 years

Results and Conclusion

BMB findings in patients with no signs of systemic lymphoma on PET-CT



Our results suggest that BMB can be safely omitted in patients with PCNSL.

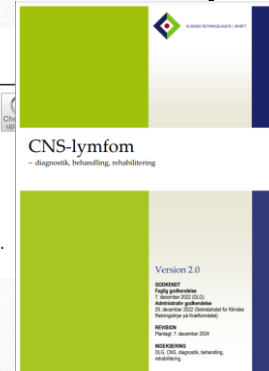
- 300 patients with DLBCL restricted to the CNS and no signs of lymphoma outside of CNS on PET/CT scans.
- No cases of DLBCL in BMB
- 25 (8.3%) of patients were diagnosed with discordant low-grade lymphoma that did not influence treatment choice.

Annals of Hematology (2023) 102:1897–1905
<https://doi.org/10.1007/s00277-023-05282-7>

ORIGINAL ARTICLE

Bone marrow biopsy can be omitted in the diagnostic workup of CNS lymphoma of DLBCL origin: a population-based retrospective study in the PET-CT era

Jelena Jelacic^{1,2} · Dennis Lund Hansen^{1,3} · Sarah Sand Carlsen⁴ · Michael Thorsgaard^{2,5} · Ditte Stampe Hersby⁶ · Karina Kannik^{5,7} · Amalie Sofie Eilso Munksgaard⁴ · Thomas Stauffer Larsen^{1,3} · Karen Juul-Jensen¹



MGUS – monoclonal gammopathy of undetermined significance, SMM – smoldering myeloma, T-LGL - T-large granular lymphocytic leukemia



Thank you for your attention

Jelena Jelacic
Dennis Lund Hansen
Thomas Stauffer Larsen
Karen Juul-Jensen



SDU

Hæmatologisk
afdeling



Region of
Southern Denmark
OUH
Odense University Hospital
Svendborg Hospital

Sarah Sand Carlsen



Rigshospitalet

Michael Thorsgaard



Aarhus University Hospital

Ditte Hersby



Herlev
Hospital



Karina Kannik

AALBORG UNIVERSITY HOSPITAL

Amalie Sofie Eilsø Munksgaard

REGION ZEALAND
ZEALAND UNIVERSITY HOSPITAL

