

The young side of
LYMPHOMA

gli under 40 a confronto

Reggio Emilia, Hotel Mercure Astoria
2-3 ottobre 2026

Ruolo dell'interim PET nel trattamento del DLBCL

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SC Ematologia U*

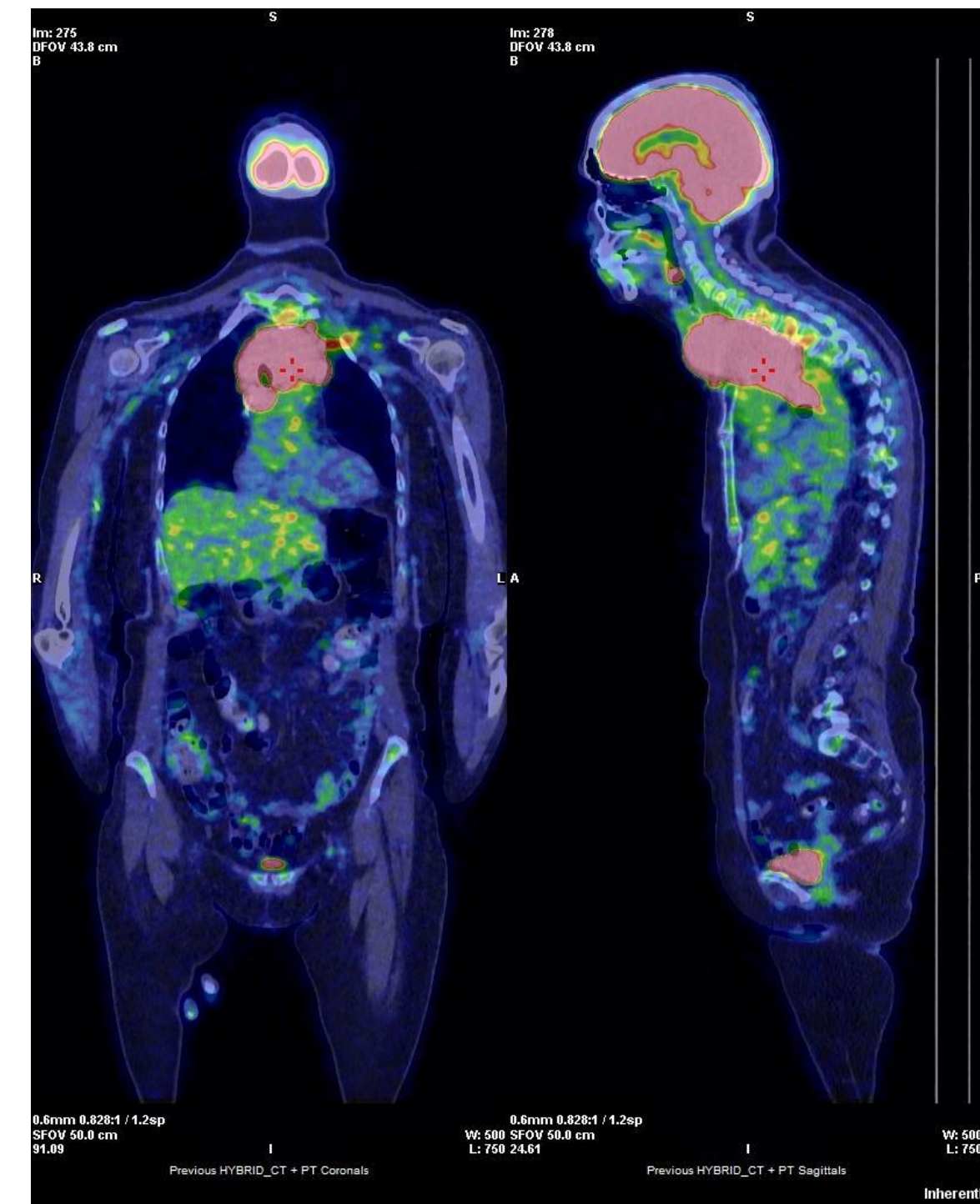
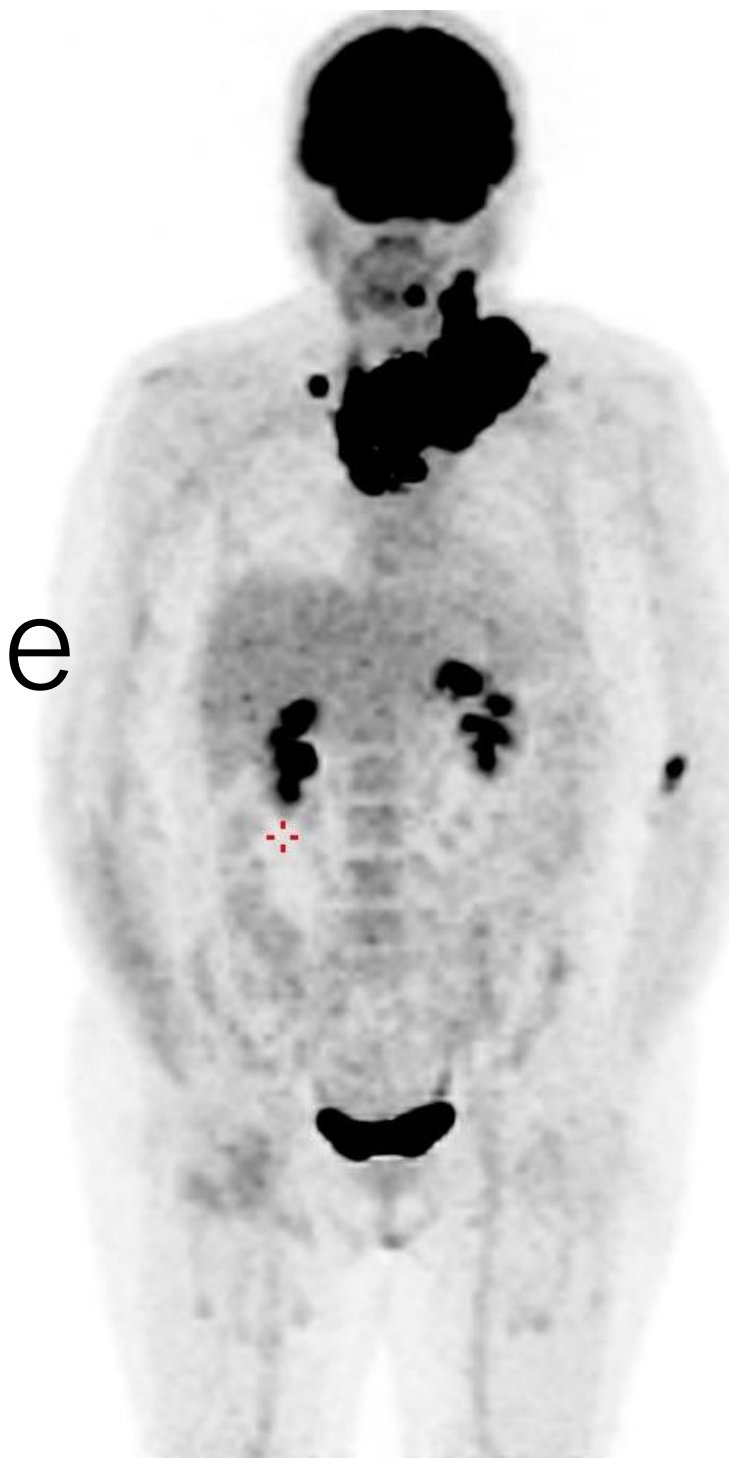


Disclosures of Michele Clerico

Company name	Research support	Employee	Consultant	Stockholder	Speakers bureau	Advisory board	Other

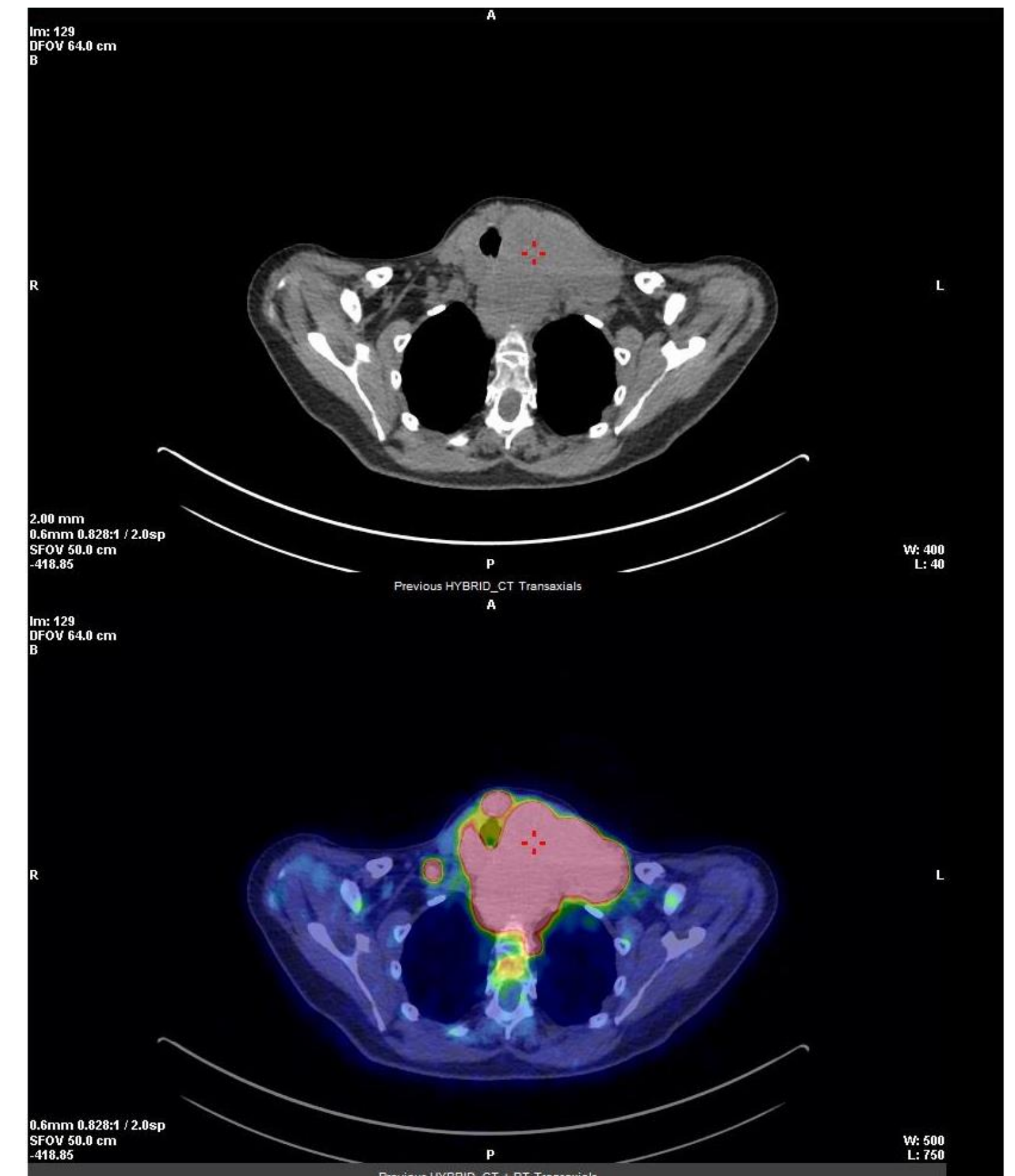
- Female, 66 years old
- Medical history: hypertension, autoimmune hypothyroidism, hypercholesterolemia
- December 2025: admission to the Oncology Service for a **thyroid mass**
 - compression of esophagus and trachea
 - bilateral paramedian vocal cord paralysis, **dysphonia and inability to swallow**
- Nodal biopsy: **diffuse large B cell lymphoma**, non germinal center B-cell like phenotype
- Blood tests: WBC 8700 Hb 12 PLTs 482k LDH 1420
- ECOG PS: 1

→ DLBCL (non-GCB), stage IIE (bulky), IPI 2, CNS-IPI 2



how do you treat?

- R-CHOP21 for 6 cycles
- Pola-R-CHP for 6 cycles
- R-CHOP21 for 3 cycles +/- radiotherapy
- R-DA-EPOCH for 6 cycles

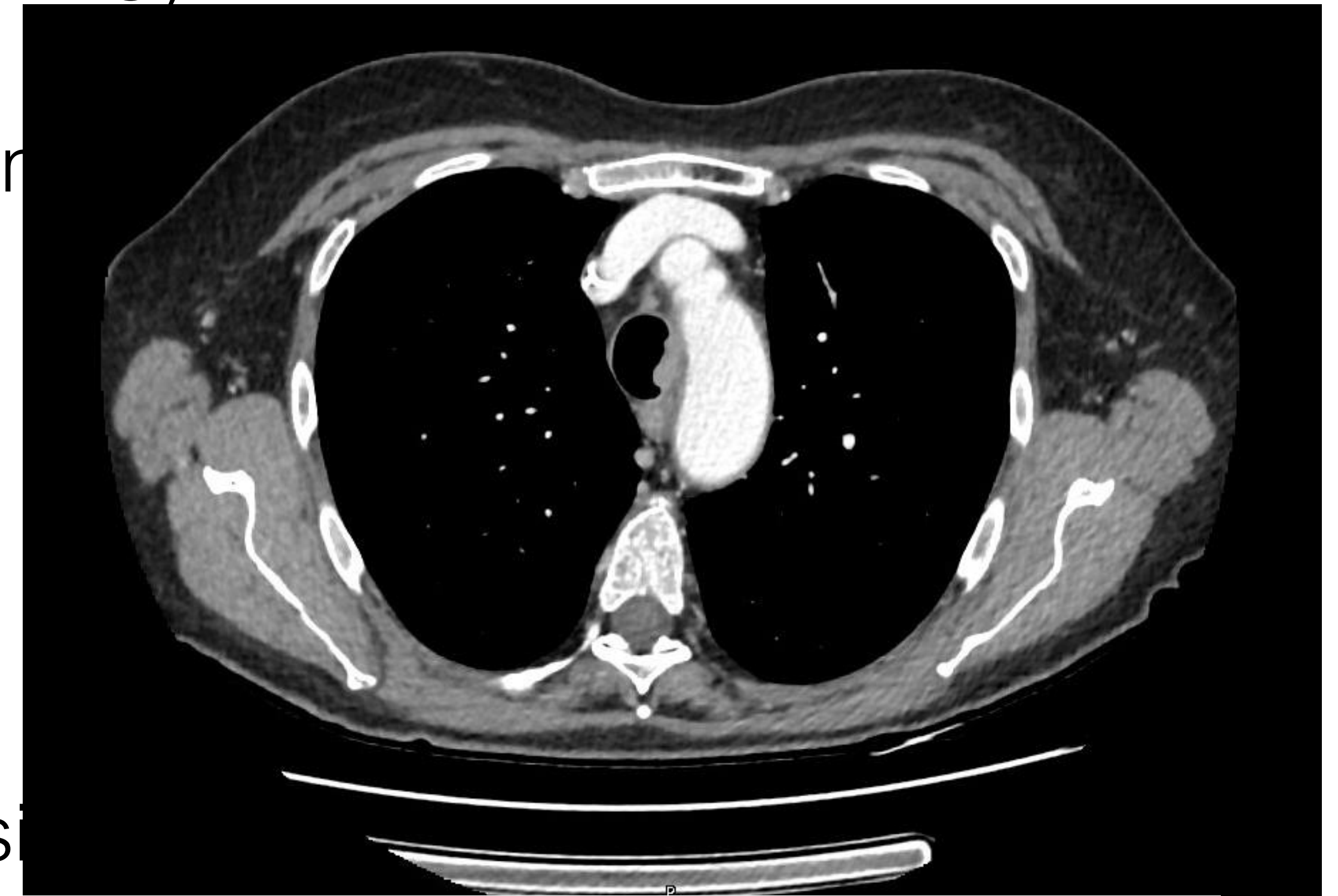


- Treatment plan: **R-CHOP21 for 6 cycles** (+ eventually ISRT in bulky area)
- Hospitalization complicated by:
 - type 1 respiratory failure (CPAP, HFNC)
 - neutropenic fever
(piperacillin/tazobactam, voriconazole, amphotericin B)

how do you restage?

- PET after 2 cycles
- PET after 4 cycles
- **CT after 4 cycles**
- Clinical response

- Treatment plan: R-CHOP21 for 6 cycles (+ eventually ISRT in bulky area)
- Hospitalization complicated by:
 - type 1 respiratory failure (CPAP, HFNC)



Access to UCI on 22/05/2026: mass occluding trachea

Response assessment by PET

Deauville score

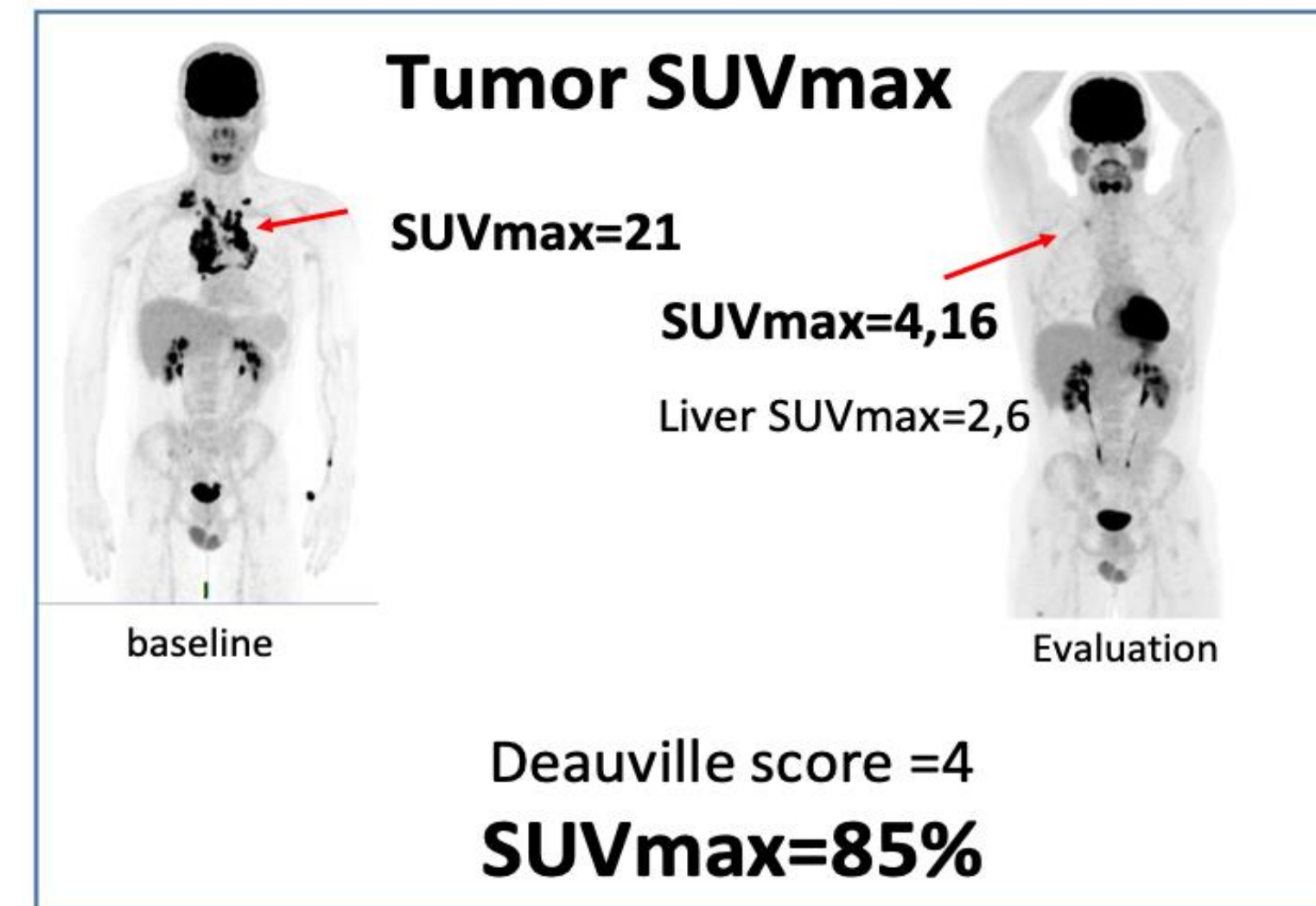
Five-point scale

1. No uptake
2. Uptake $\leq$ mediastinum
3. Uptake $>$ mediastinum but $\leq$ liver
-
4. Uptake moderately increased above liver at any site
5. Markedly increased uptake at any site including new sites of disease

Qualitative method

% deltaSUV max reduction

$$= \frac{\text{baselineSUVmax} - \text{iPETSUVmax}}{\text{baseline SUVmax}}$$



Quantitative method

iPET: where do we come from?

VOLUME 27 · NUMBER 11 · APRIL 10 2009

JOURNAL OF CLINICAL ONCOLOGY

E D I T O R I A L

The Case Against Heavy PETing

Bruce Cheson, *Department of Hematology/Oncology, Georgetown University Hospital, Washington, DC*

“Although patients often request interim scans, a negative scan does not guarantee a positive clinical outcome, and a positive scan does not ensure ultimate doom but clearly engenders anxiety in the patient and caregivers»



LYMPHOID NEOPLASIA | MARCH 1, 2012

Interim 18-FDG-PET/CT failed to predict the outcome in diffuse large B-cell lymphoma patients treated at the diagnosis with rituximab-CHOP

 Clinical Trials & Observations

Patrizia Pregno, Annalisa Chiappella, Marilena Bellò, Barbara Botto, Simone Ferrero, Silvia Franceschetti, Francesca Giunta, Marco Ladetto, Giorgio Limerutti, Massimo Menga, Maura Nicolosi, Giorgio Priolo, Benedetta Puccini, Luigi Rigacci, Flavia Salvi, Luca Vaggelli, Roberto Passera, Gianni Bisi, Umberto Vitolo

VOLUME 32 · NUMBER 27 · SEPTEMBER 20 2014

JOURNAL OF CLINICAL ONCOLOGY

S P E C I A L A R T I C L E

Role of Imaging in the Staging and Response Assessment of Lymphoma: Consensus of the International Conference on Malignant Lymphomas Imaging Working Group

Sally F. Barrington, N. George Mikhaeel, Lale Kostakoglu, Michel Meignan, Martin Hutchings, Stefan P. Mueller, Lawrence H. Schwartz, Emanuele Zucca, Richard I. Fisher, Judith Trotman, Otto S. Hoekstra, Rodney J. Hicks, Michael J. O'Doherty, Roland Hustinx, Alberto Biggi, and Bruce D. Cheson

«Trials are evaluating the role of PET response–adapted therapy. Currently, changing treatment solely on the basis of iPET-CT is not recommended, unless there is clear evidence of progression (type 1)»

Intensification treatment based on early FDG-PET in patients with high-risk diffuse large B-cell lymphoma: a phase II GELTAMO trial

Pardal E et al, 2014

iPET is prognostic for PFS and OS
 $\Delta\text{SUV}_{\text{max}} (\geq 66\%)$ better than DS

Prognostic value of interim FDG-PET in diffuse large cell lymphoma: results from the CALGB 50303 Clinical Trial

Schöder H et al, 2020

iPET is prognostic for PFS and OS
 $\Delta\text{SUV}_{\text{max}} \geq 66\%$ after 2 cycles

Assessment of the efficacy and prognostic value of ^{18}F -FDG PET-CT using deauville 5-point scale and $\Delta\text{SUV}_{\text{max}}$ methods in diffuse large B-cell lymphoma patients

Li JP et al, 2025

$\Delta\text{SUV}_{\text{max}} > 78\%$ after 3-4 cycle:
higher accuracy and predictive value

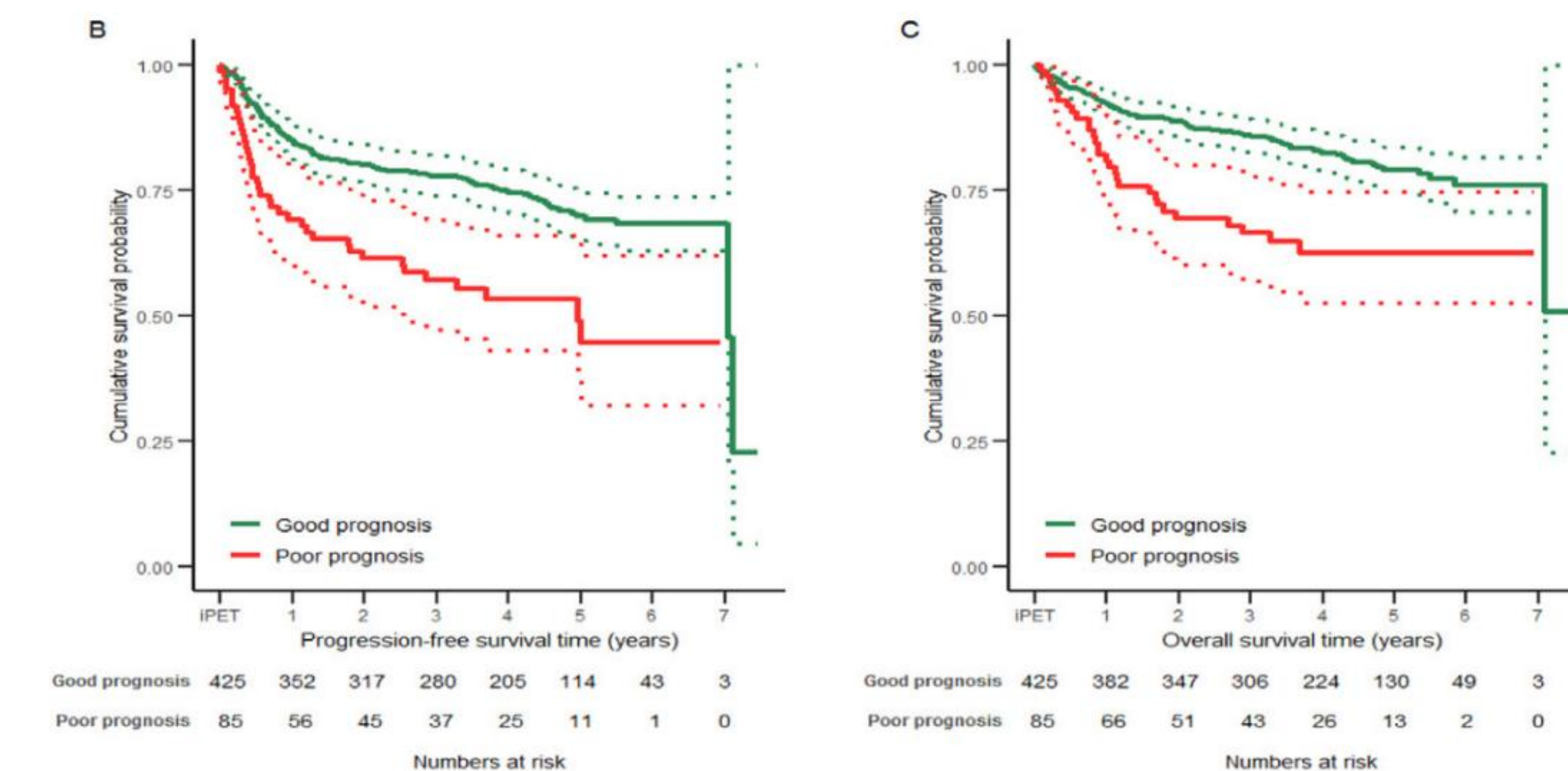
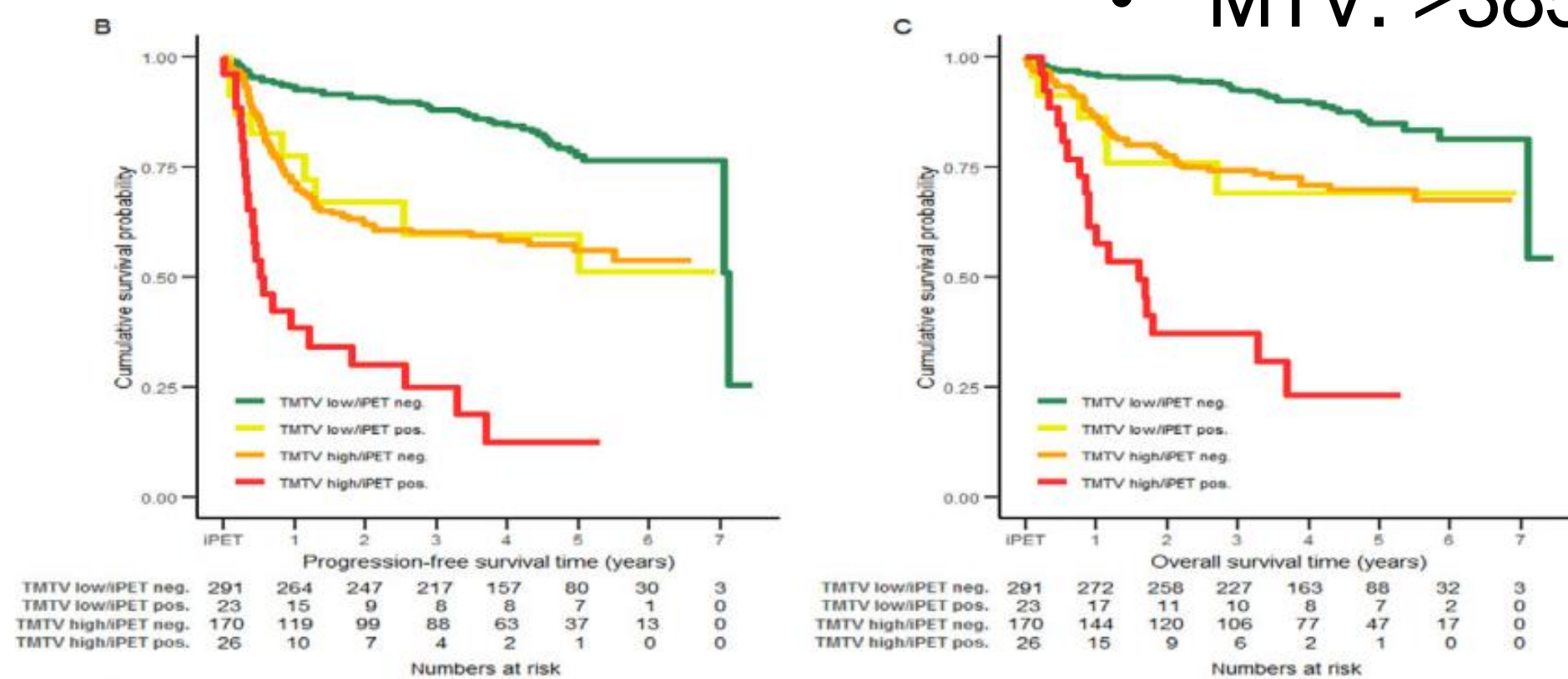
iPET: where do we come from?

- PETAL trial?
- IMPI score?

Dynamic risk assessment based on positron emission tomography scanning in diffuse large B-cell lymphoma: Post-hoc analysis from the PETAL trial

Schmitz C et al, Eur J Cancer 2019

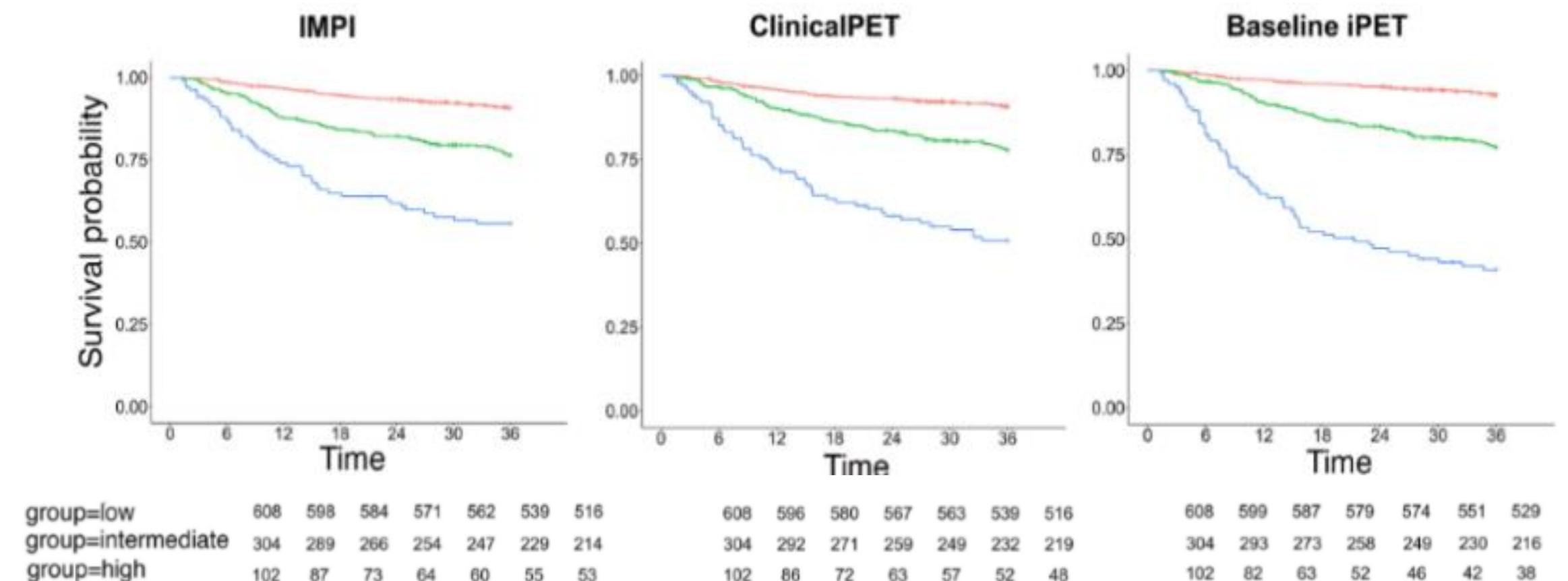
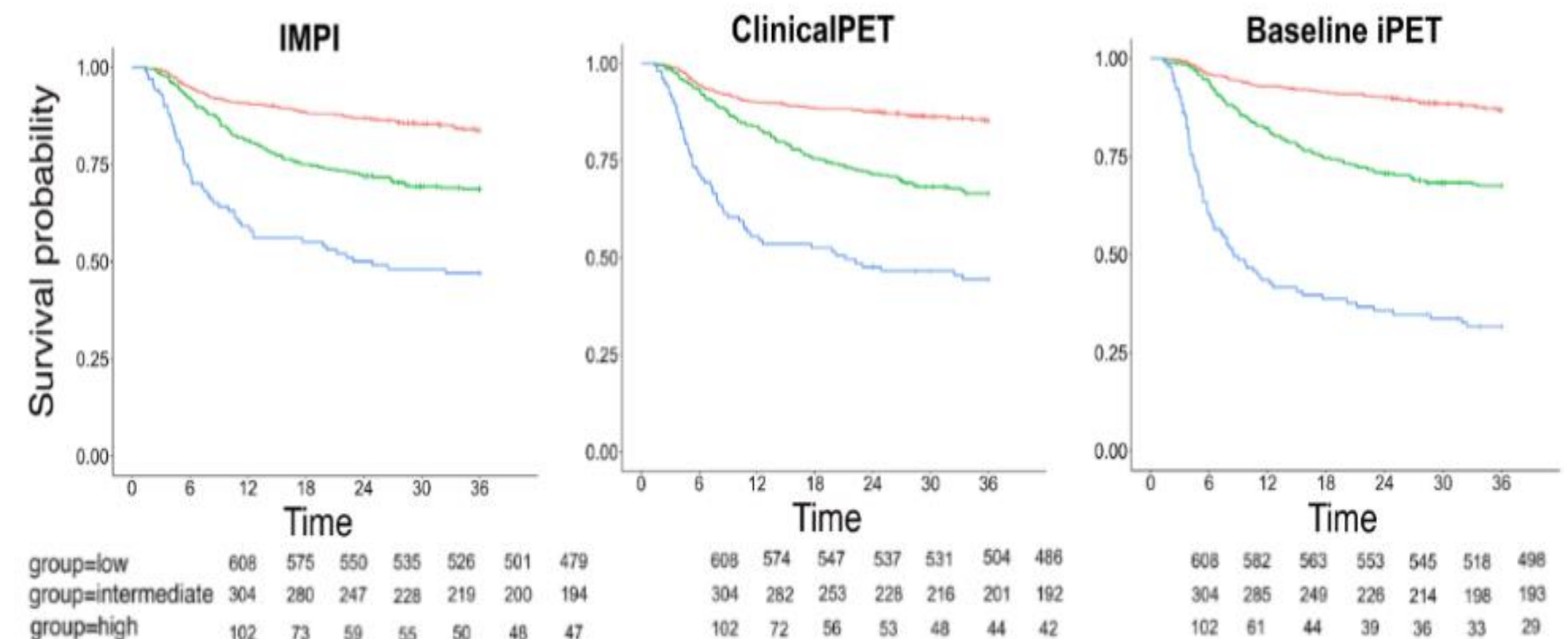
- 510 DLBCL pts
- iPET: $\Delta\text{SUVmax} > 66\%$
- MTV: $> 385 \text{ mL}$



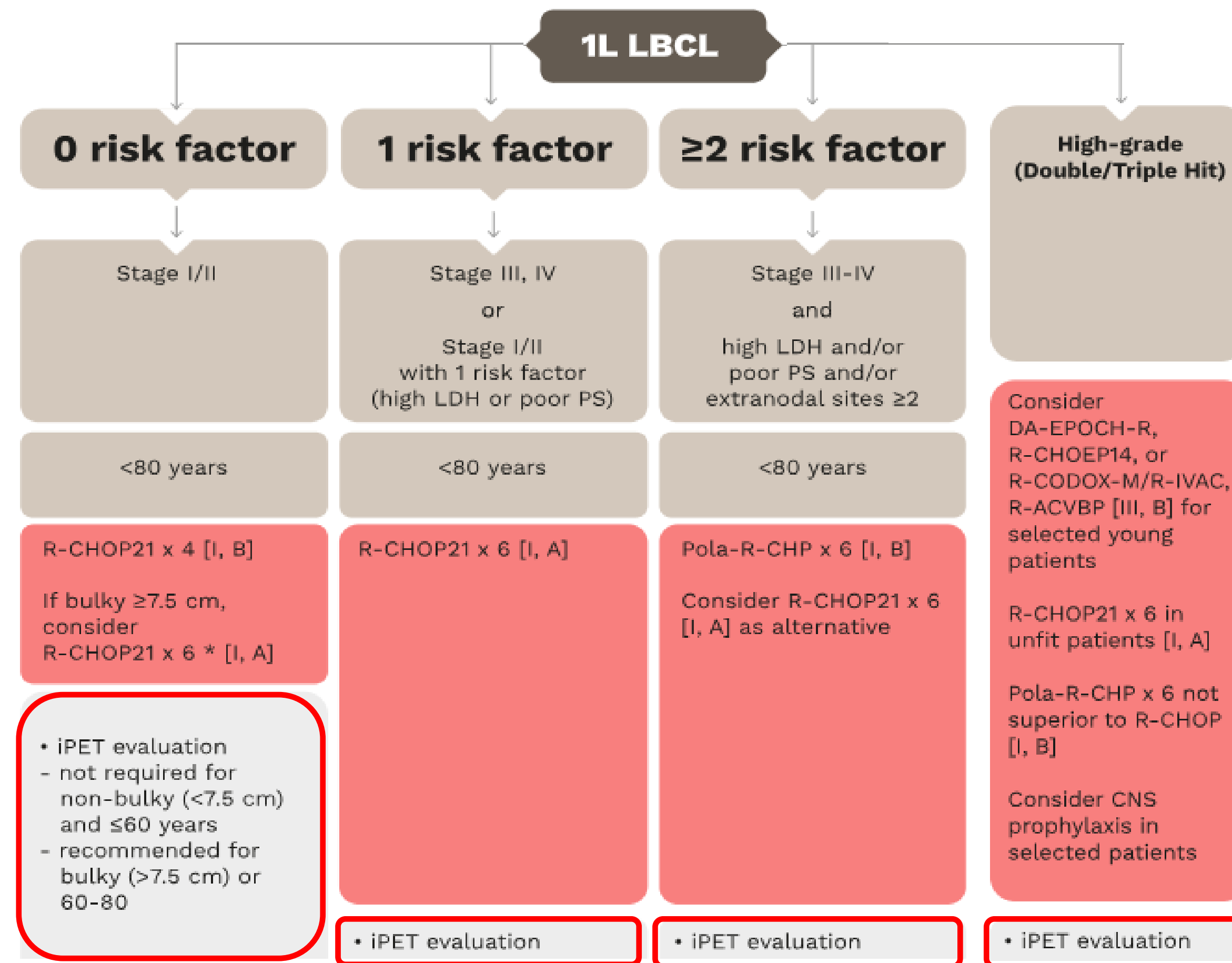
Risk prediction in diffuse large B-cell lymphoma improves when combining baseline PET features with interim PET response

Eertink JJ et al, Haematologica, 2025

Baseline iPET model: MTV age, DmaxBulk, iPET (ΔSUVmax)

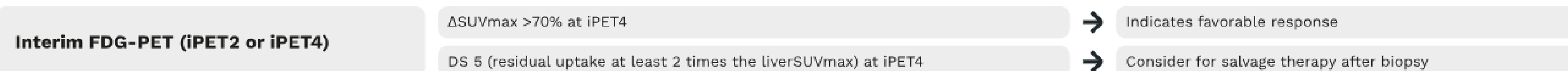


iPET: who are we?



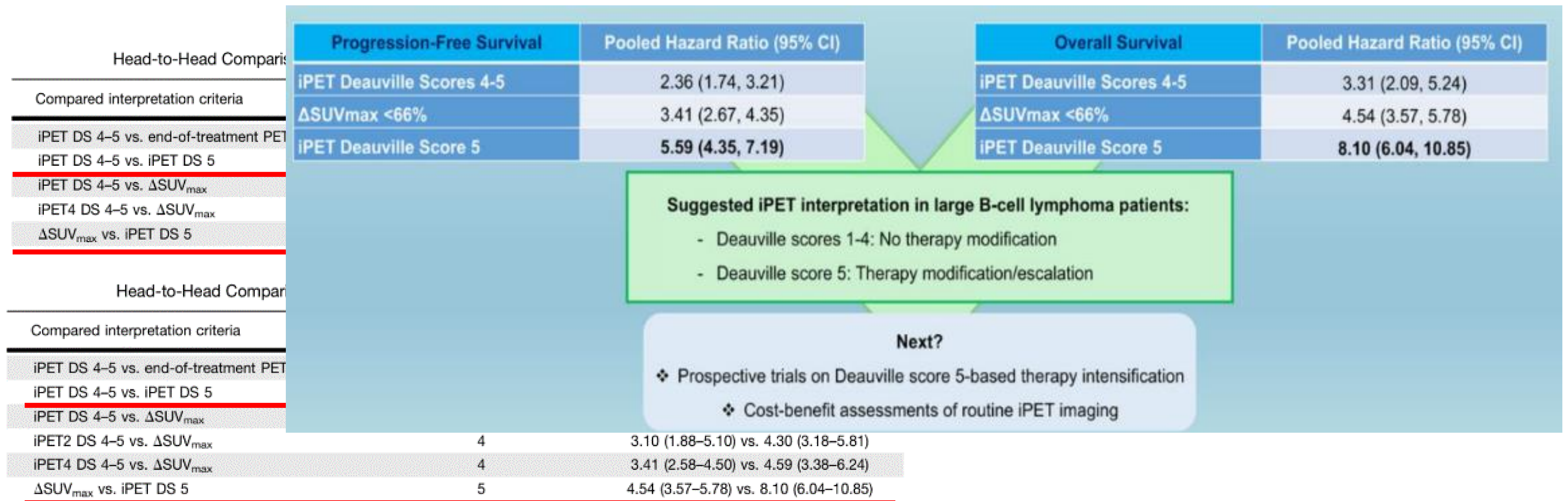
“Interim PET scans (iPET2, iPET4) after 2–4 R-CHOP cycles may be helpful to establish chemosensitivity early, as it is associated with a strong NPV, using the Δ SUVmax reduction criteria.

Reports suggest that 94%–100% of patients achieving CMR at iPET maintain CMR at EoT PET, although MYC-positive DLBCL may show aberrant PET responses.



Prognostic Value of Interim [^{18}F]FDG PET in Large B-Cell Lymphoma: A Systematic Review and Meta-analysis with a Particular Focus on Interim Deauville Score 5 Disease

Mirshahvalad et al, Journ Nucl Med, 2026



The Prognostic Role of Interim [18F]FDG PET/CT in Diffuse Large B-Cell Lymphoma: An Updated Systematic Review and Meta-analysis

Domenico Albano,^{1,2} Stephane Chauvie,³ Alessio Rizzo,⁴ Francesco Bertagna,^{1,2}
Beatrice Casadei,⁵ Umberto Vitolo,⁶ Alessandra Tucci,⁷ Pier Luigi Zinzani,⁵
Luca Guerra^{8,9}

The young side of LYMPHOMA

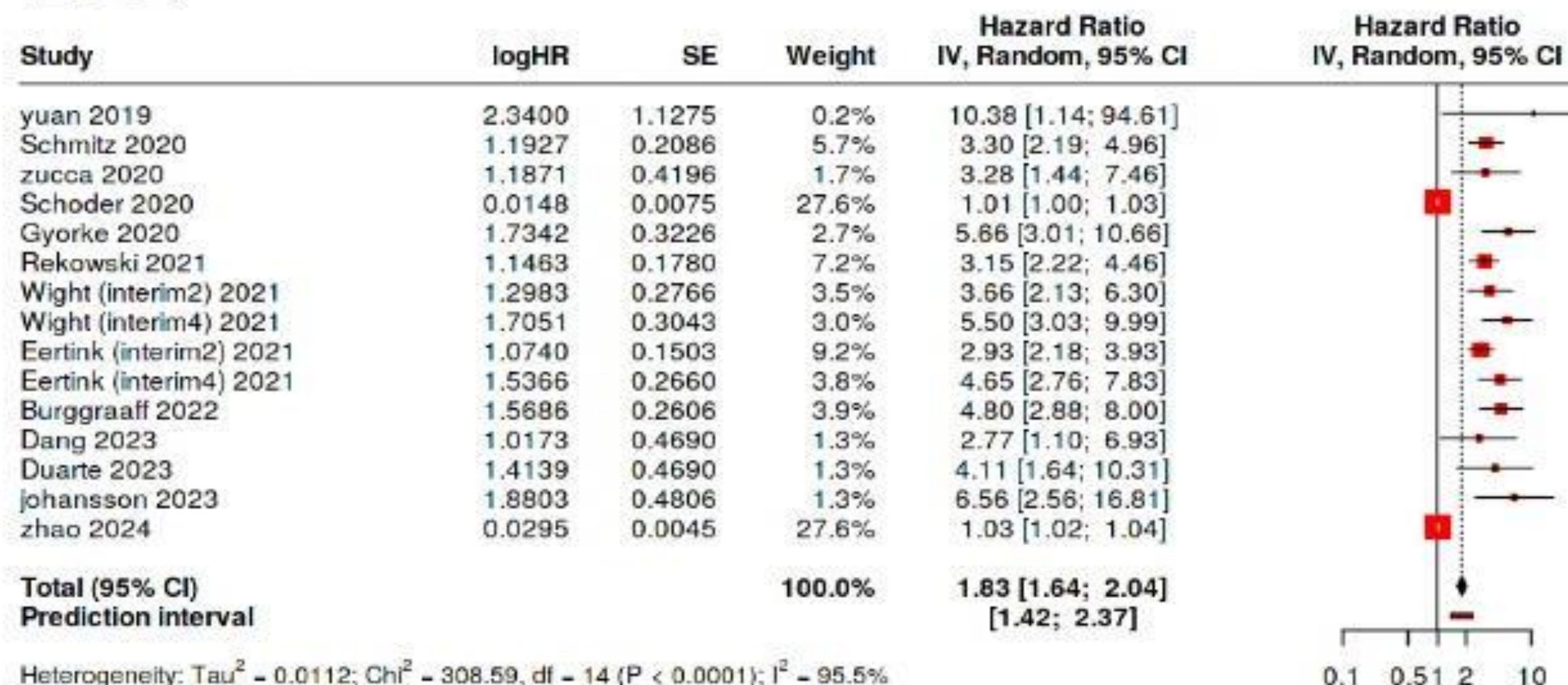
gli under 40 a confronto

DS5



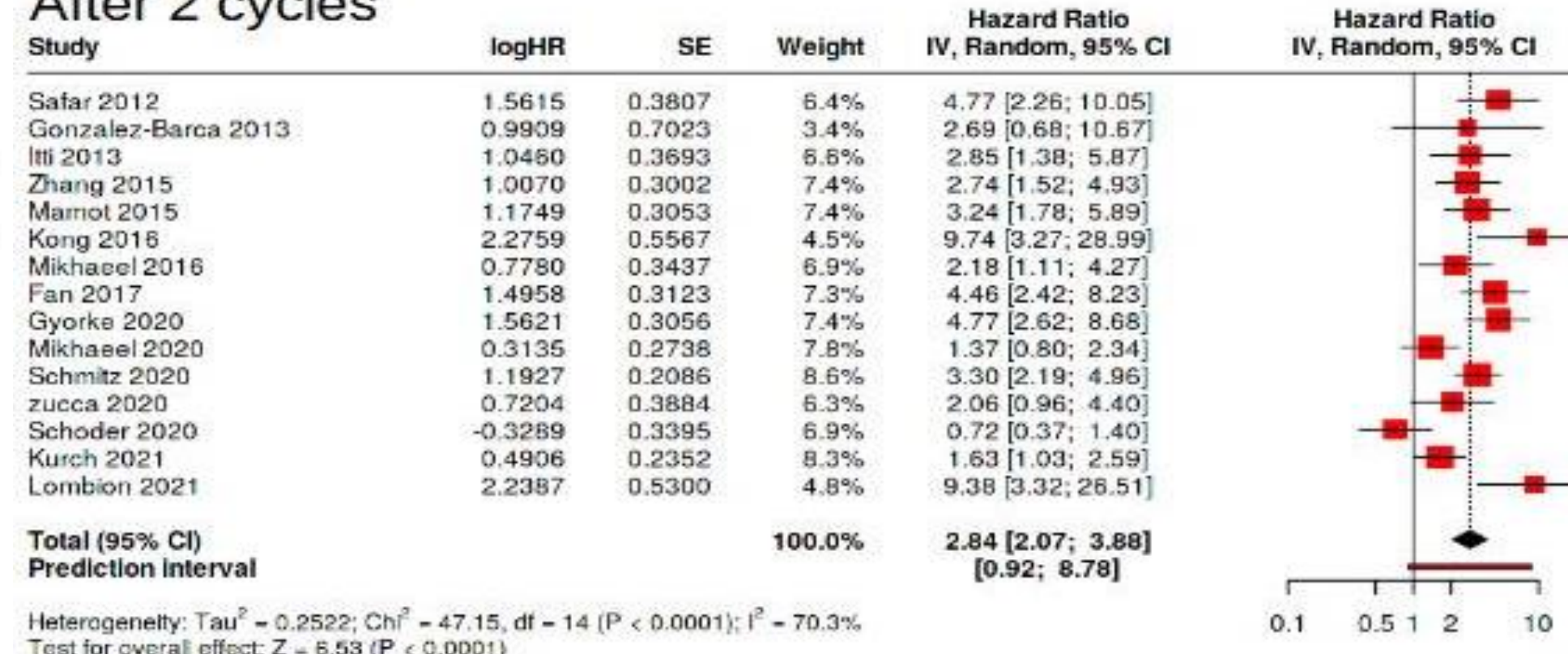
Heterogeneity: $\tau^2 = 0.0723$; $\chi^2 = 15.17$, $df = 9$ ($P = 0.0864$); $I^2 = 40.7\%$
Test for overall effect: $Z = 12.51$ ($P < 0.0001$)

Δ SUV



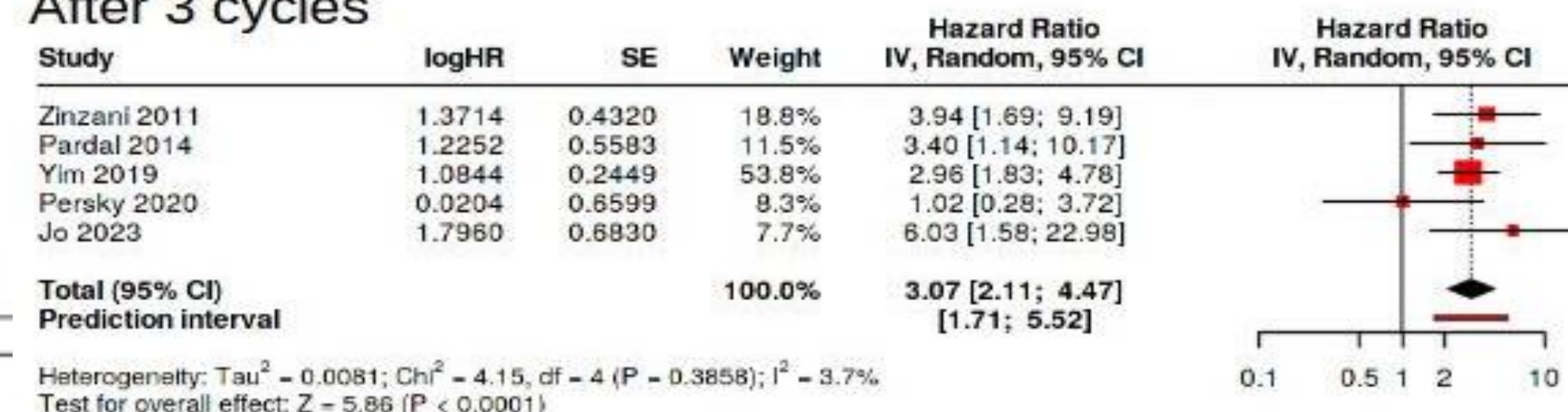
Heterogeneity: $\tau^2 = 0.0112$; $\chi^2 = 308.59$, $df = 14$ ($P < 0.0001$); $I^2 = 95.5\%$
Test for overall effect: $Z = 10.88$ ($P < 0.0001$)

After 2 cycles



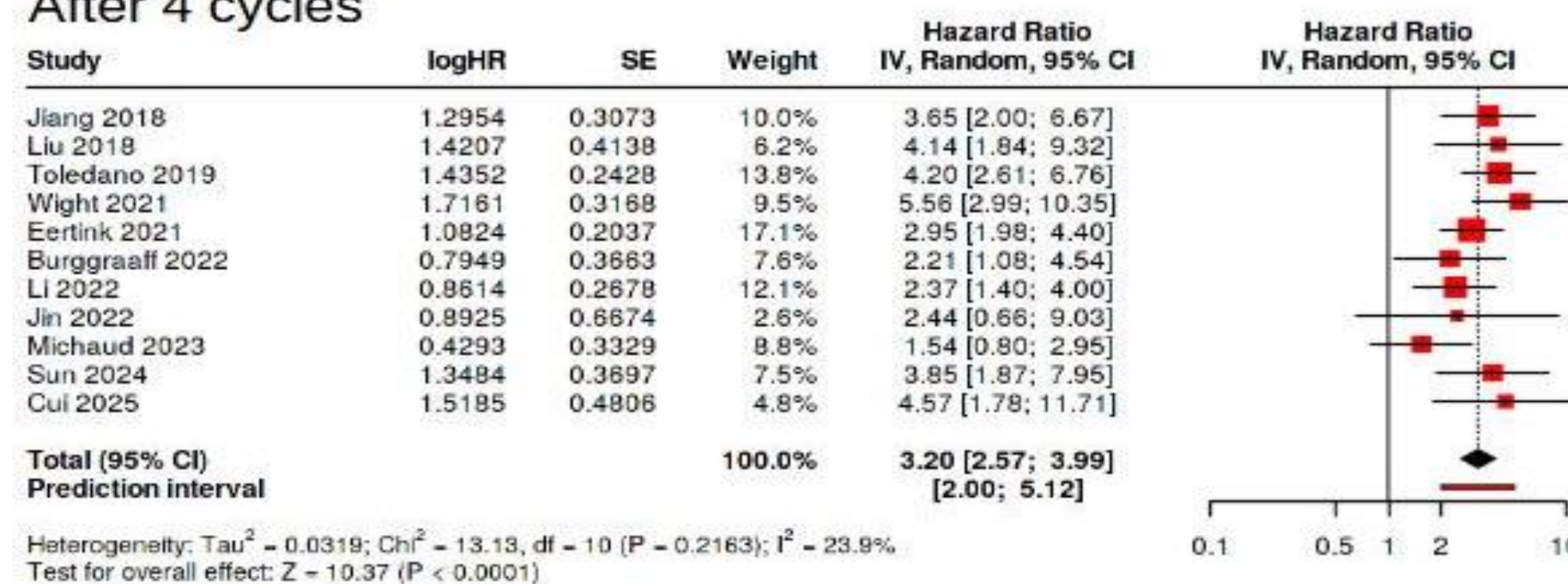
Heterogeneity: $\tau^2 = 0.2522$; $\chi^2 = 47.15$, $df = 14$ ($P < 0.0001$); $I^2 = 70.3\%$
Test for overall effect: $Z = 6.53$ ($P < 0.0001$)

After 3 cycles



Heterogeneity: $\tau^2 = 0.0081$; $\chi^2 = 4.15$, $df = 4$ ($P = 0.3858$); $I^2 = 3.7\%$
Test for overall effect: $Z = 5.86$ ($P < 0.0001$)

After 4 cycles



Heterogeneity: $\tau^2 = 0.0319$; $\chi^2 = 13.13$, $df = 10$ ($P = 0.2163$); $I^2 = 23.9\%$
Test for overall effect: $Z = 10.37$ ($P < 0.0001$)

iPET: where do we go?

- ctDNA + PET
- sustainability?

Caso Clinico

- Intubata e successivo posizionamento di protesi tracheale
- Linfocitoaferesi
- Steroide HD + Polatuzumab + ISRT
- PET pre CAR
- CAR-T axicel in data
- PET M3

what iPET would you choose?

- iPET 2 DS
- **iPET 4 DS**
- iPET 2 D-SUVmax
- iPET 4 D-SUVmax

take home messages

thank you

backup slides

Assessment of the efficacy and prognostic value of 18F-FDG PET-CT using deauville 5-point scale and Δ SUVmax methods in diffuse large B-cell lymphoma patients

Li JP et al. 2025

D-SUVmax > 78% - 3-4 cycle: higher accuracy and predictive value.

Interim and end-of-treatment PET-CT suffers from high false-positive rates in DLBCL: Biopsy is needed prior to treatment decisions

Tokola S et al. 2021

High FP rate of i-PET according Lugano criteria