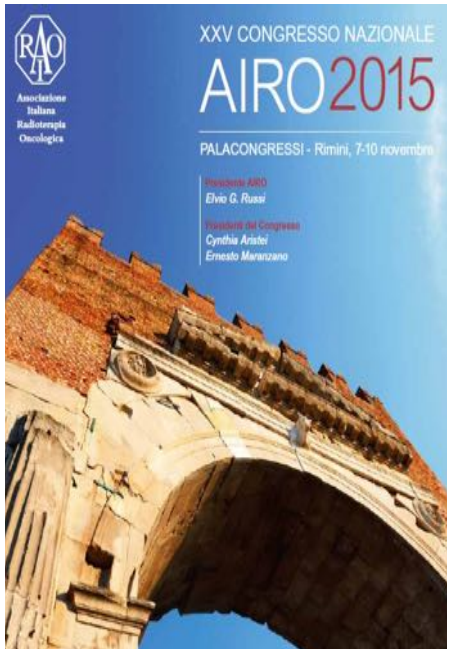

Risposta metabolica post R-chemioterapia e ruolo della radioterapia di consolidamento nei PMBCL: studio osservazionale mono-istituzionale

C. Piva, A.R. Filippi, M. Levis, A. Chiappella, D. Caracciolo, G. Bisi, U. Vitolo e U. Ricardi

Radioterapia, Dipartimento di Oncologia, Università di Torino
Ematologia, Città della Salute e della Scienza di Torino
Medicina Nucleare, Dipartimento di Scienze Mediche, Università di Torino

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BACKGROUND

- PMBCL is a rare and aggressive subtype of extranodal B-cell malignancies

- Standard R-chemotherapy plus Radiotherapy achieves durable complete remission in approximately 85% of PMBCL patients

- Metabolic response (FDG-PET) after R-chemotherapy may potentially select patients at higher risk of relapse and death

- The role of radiation therapy for high-risk patients is uncertain

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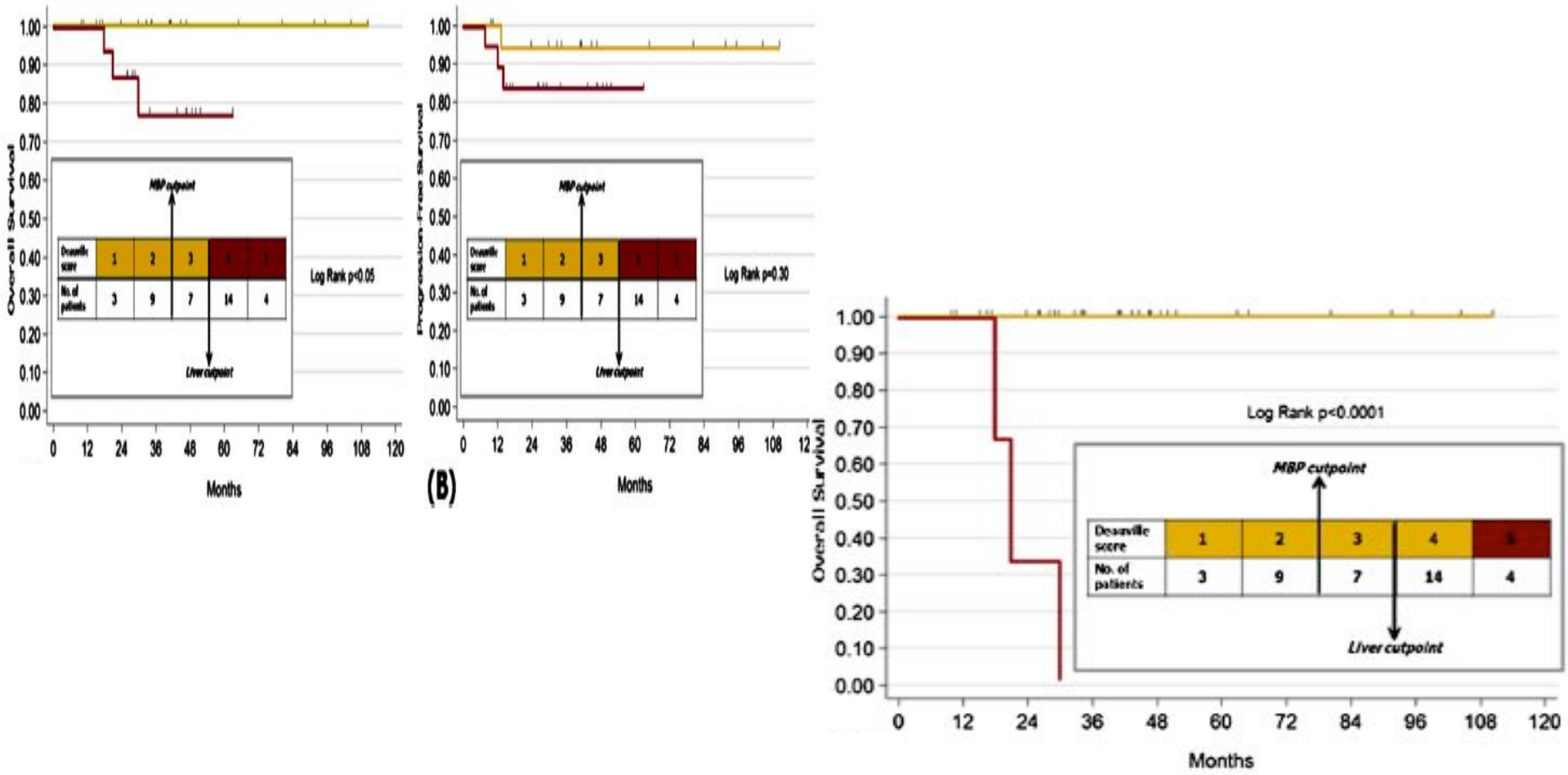
Radiation Therapy in Primary Mediastinal B-Cell Lymphoma With Positron Emission Tomography Positivity After Rituximab Chemotherapy



[Filippi AR et al, IJROBP, 2013]

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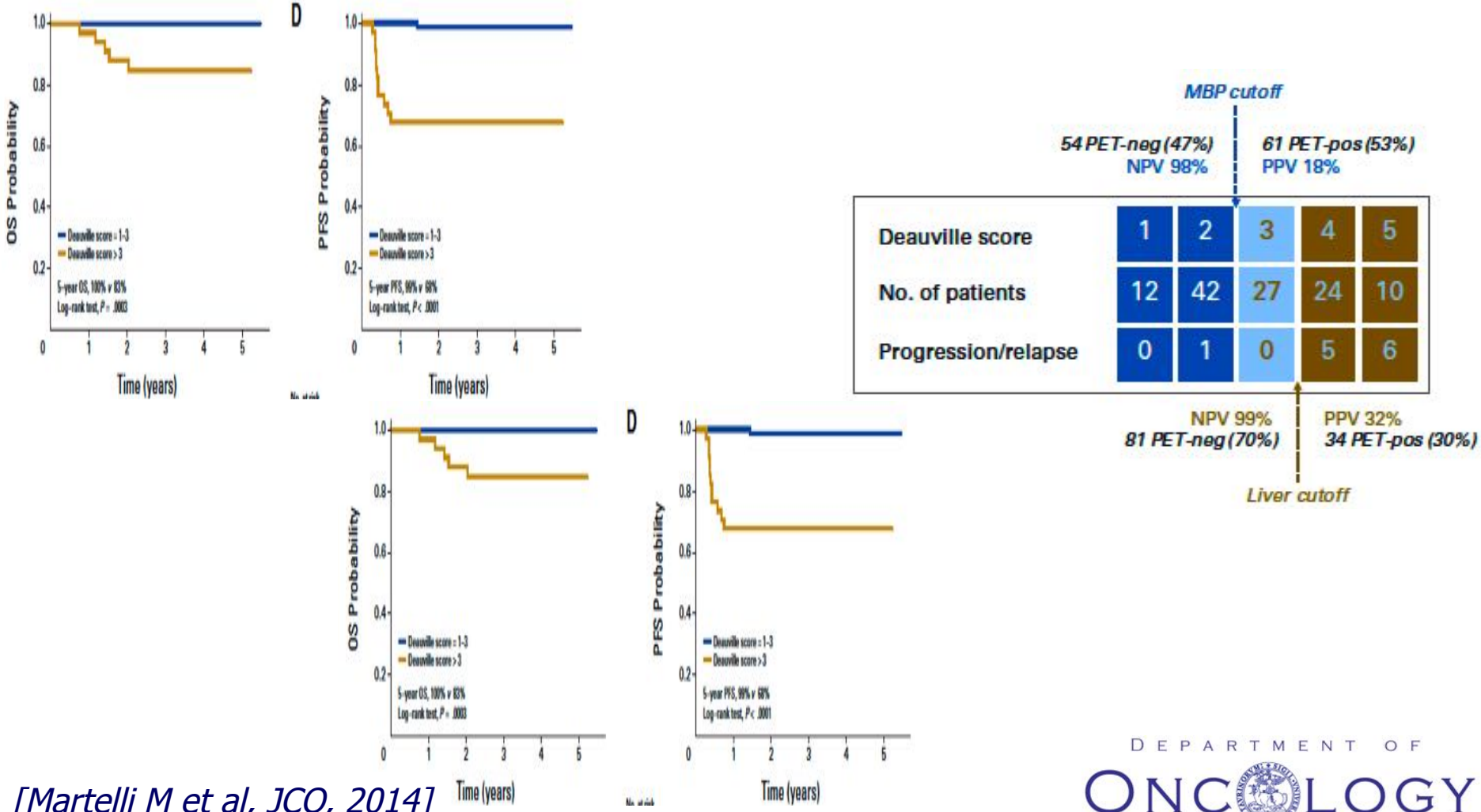
[^{18}F]Fluorodeoxyglucose Positron Emission Tomography Predicts Survival After Chemoimmunotherapy for Primary Mediastinal Large B-Cell Lymphoma: Results of the International Extranodal Lymphoma Study Group IELSG-26 Study



[Martelli M et al, JCO, 2014]

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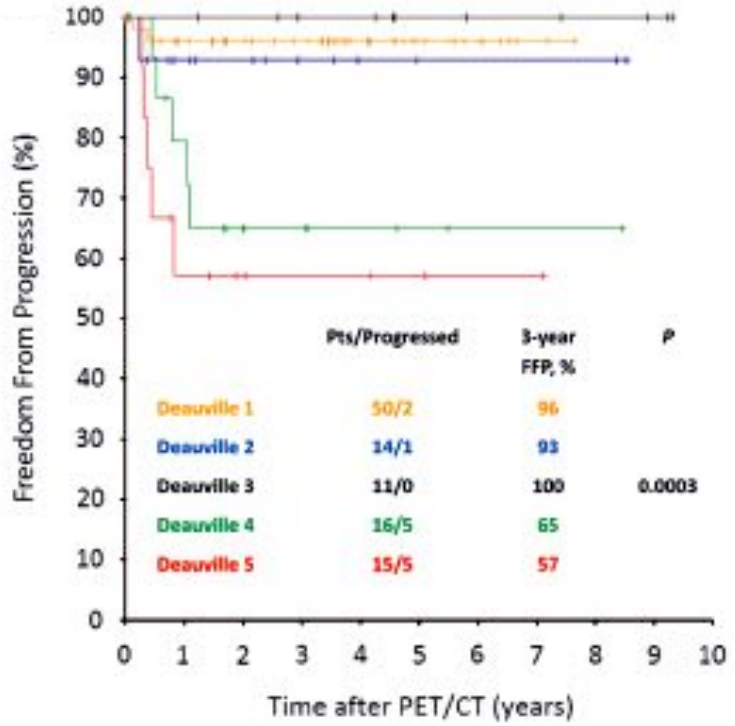
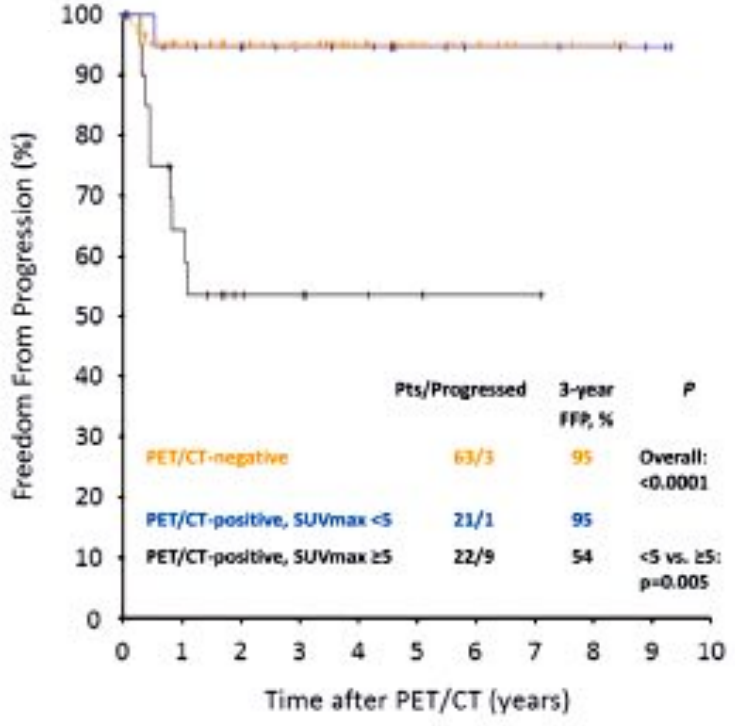
LETTER TO THE EDITOR

PET/CT in primary mediastinal large B-cell lymphoma responding to rituximab-CHOP: An analysis of 106 patients regarding prognostic significance and implications for subsequent radiotherapy





[Vassilakopoulos TP et al, Luekemia, 2015]

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Diagnosis PMLBCL
Registration
PET-CT 0

RCHOP 14-21; R-V/MACOP-B
R-EPOCH; R-ACVBP; R m-CHOP

Standard therapy
***R-Chemo**

PET-CT 1 (5-6week)
Central review

Positive
D5PS 4-5

Negative
D5PS 1-3

Randomized 1:1

Treatment based on investigator choice
(follow-up for PFS)

IFRT

Observation

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STUDY PURPOSE

The aim of this retrospective observational study was to assess the prognostic significance of 18FDG-PET/CT and the role of RT in PET-positive patients in relation to the level of positivity after R-chemotherapy

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MATERIALS AND METHODS (1)

2003-2014

51 patients

Inclusion criteria:

- age ≥ 18
- histology-proven PMBCL
- stage I-II
- aaIPI score 0-2
- previously untreated
- CT-PET at diagnosis and after CT (with D5PS and SUVmax)
- any rituximab-chemotherapy regimen
- RT at Our Institution

Exclusion criteria:

- chemotherapy not containing rituximab
- not FDG-PET at diagnosis or after CT
- gray zone lymphoma

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MATERIALS AND METHODS (2)

- **Response after first line R-Chemo according to D5PS**

Deauville Score	[^{18}F]FDG Uptake
1	No uptake
2	≤ Mediastinal blood pool
3	> Mediastinum and ≤ liver
4	Moderately more than liver at any site
5	Markedly more* than liver at any site and/or new sites of disease

Abbreviations: [^{18}F]FDG, [^{18}F]fluorodeoxyglucose; PET, positron emission tomography.
*Maximum standardized uptake value of the lesion more than two times liver uptake.

- **Degree of SUVmax in D5PS 3-5:**

  < 5 vs ≥ 5

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RESULTS (1)

Characteristics	No.	%
Age Median Range	32 18 – 65	
Sex Male Female	 21 30	 41.2 58.8
B symptoms	20	39.2
Bulky disease	45	88.2
LDH > 450	36	70.6
aaIPI score 0 1 2	 7 26 18	 13.7 51 35.3
R-Chemotherapy R-VACOP-B R-CHOP 14 R-CHOP 21	 16 28 7	 31.4 54.9 13.7
Radiotherapy dose (Gy) Median Range	30.6 27 – 40	

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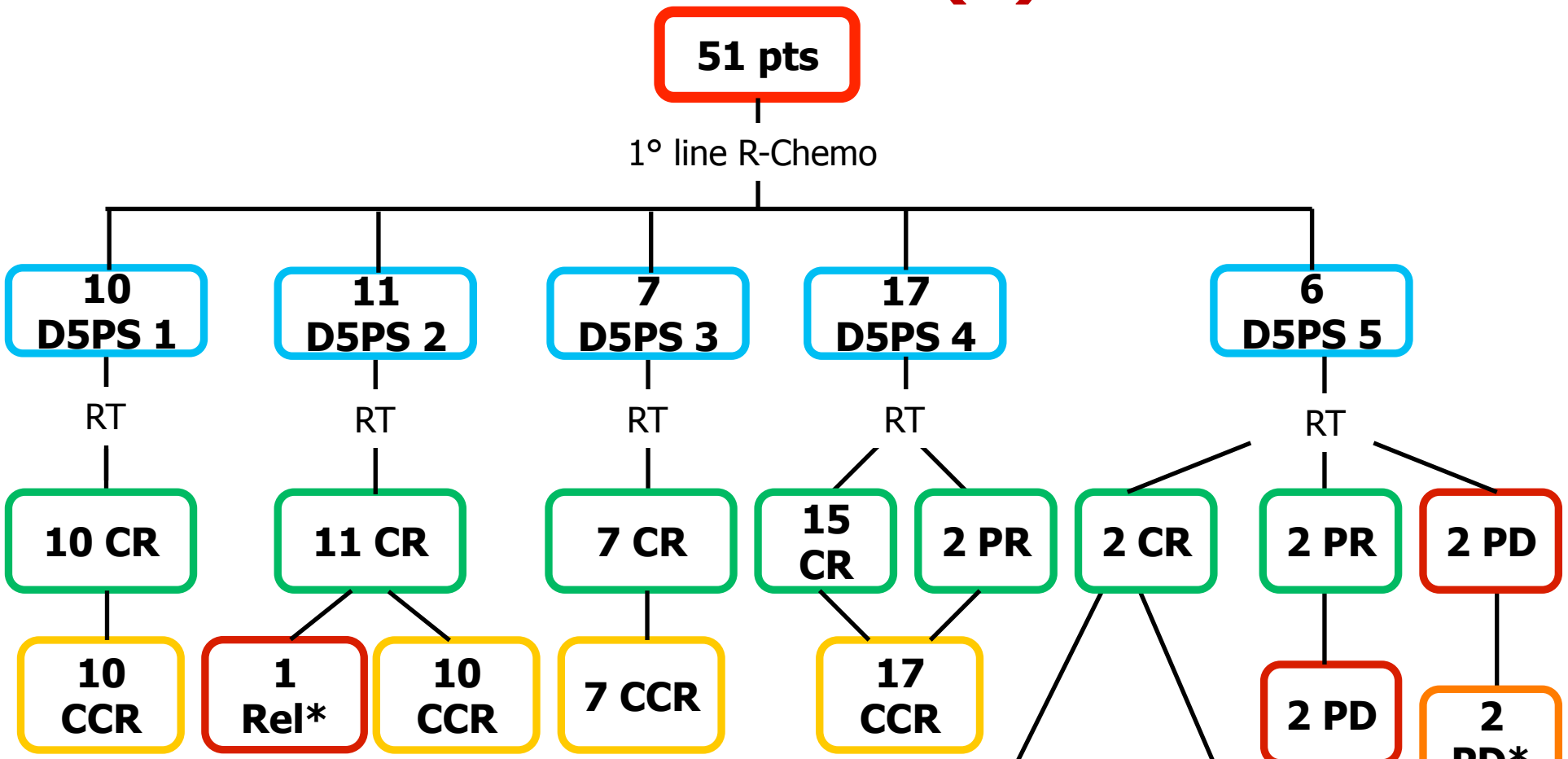
RESULTS (2)

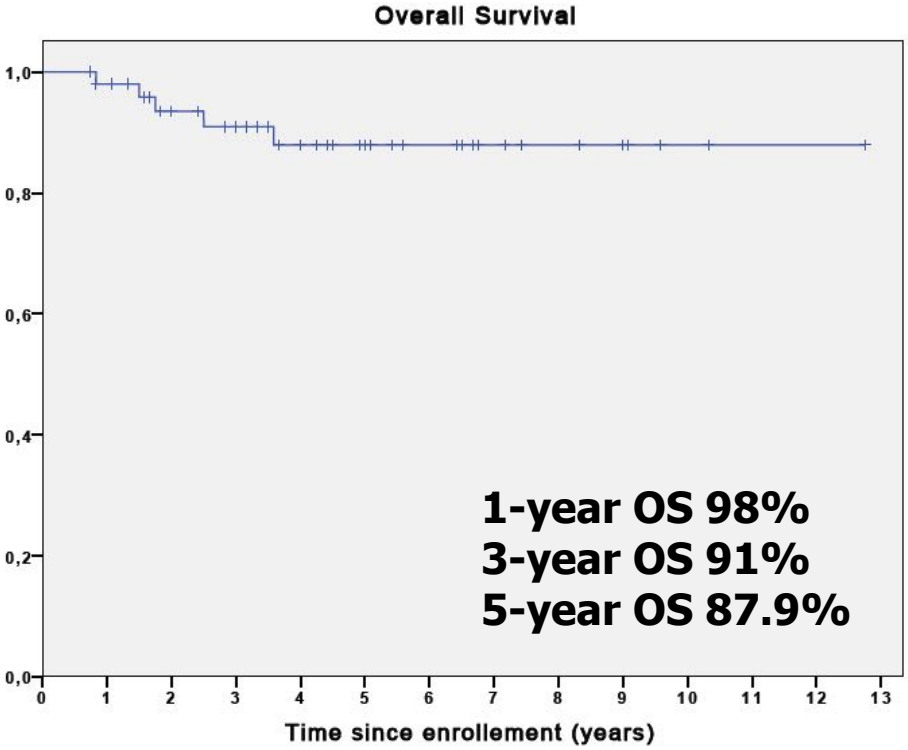


30 pts with D5PS 3-5:

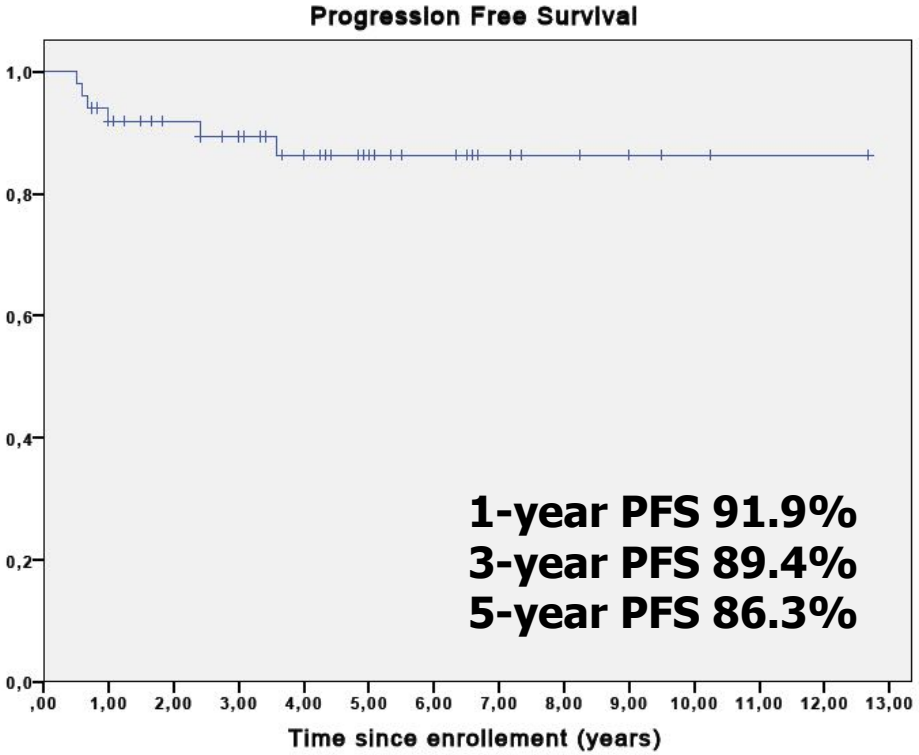
- ❑ SUVmax < 5: 22 pts (73.3%)
- ❑ SUVmax ≥ 5: 8 pts (26.7%)

*** death**

RESULTS (3)



Median follow-up time:
51 months (range: 9 – 153 months)



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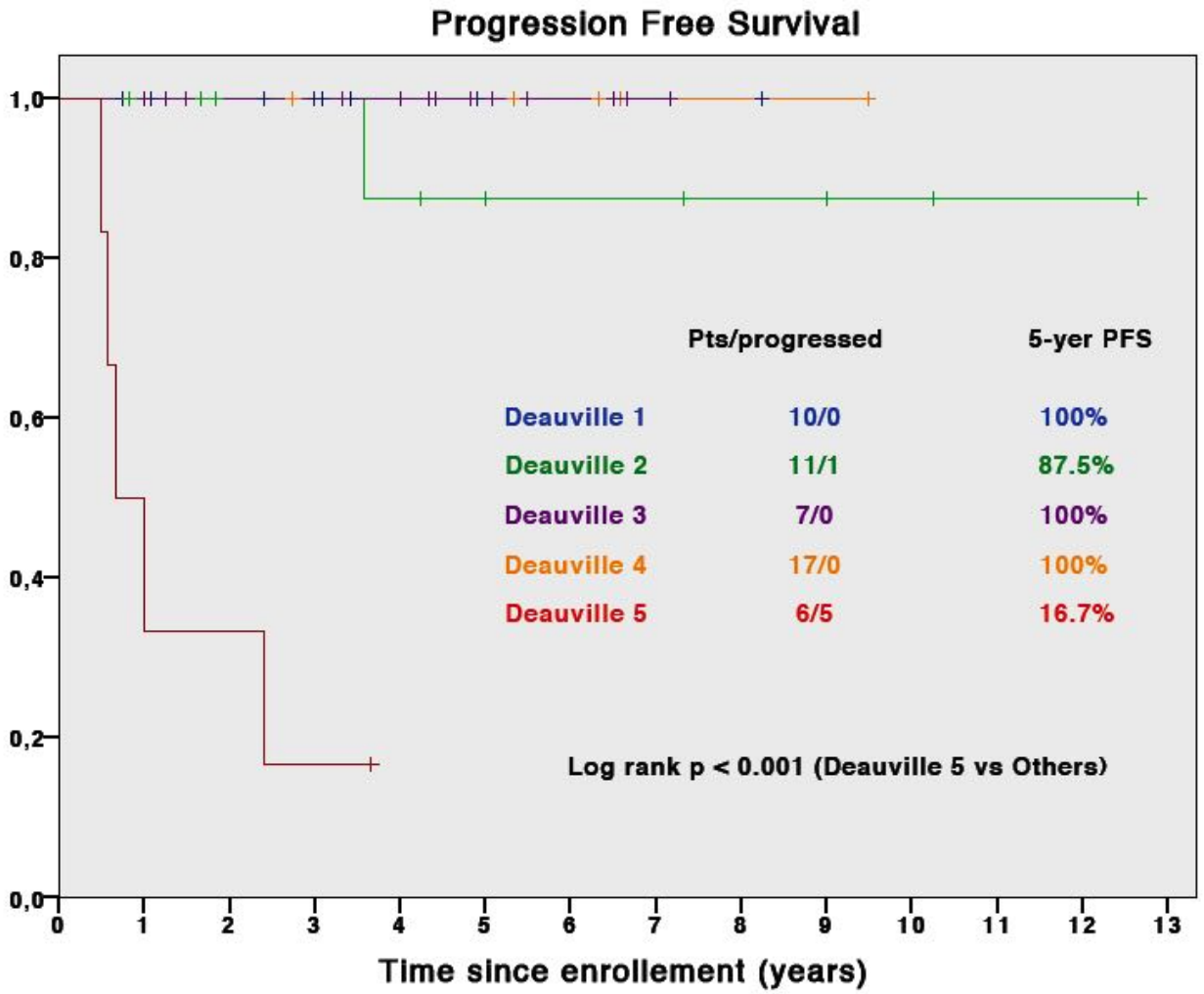
RESULTS (4)



D5PS 4-5:

- ❑ PPV (death): 17.4%
- ❑ PPV (progression/relapse): 21.7%
- ❑ NPV (death): 96.4%
- ❑ NPV (progression/relapse): 96.4%

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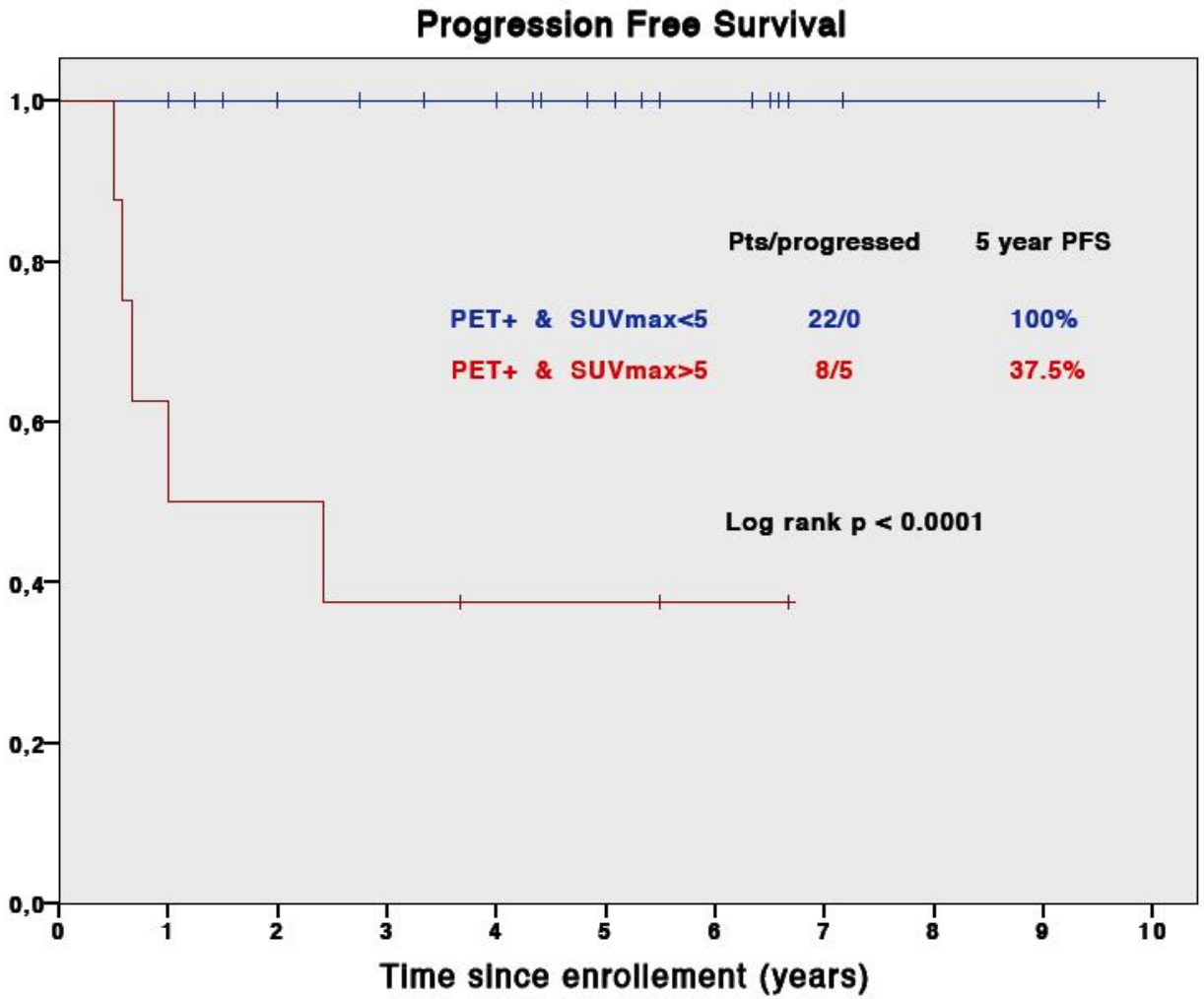
RESULTS (5)



SUV ≥ 5:

- ❑ PPV (death): 50%
- ❑ PPV (progression/relapse): 62.5%
- ❑ NPV (death): 96.2%
- ❑ NPV (progression/relapse): 96.2%

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CONCLUSION

- *RT is able to convert in persistent CR the majority of 18FDG-PET/CT positive patients with a Deauville score of 4*

- *Patients with very poor metabolic response (D5PS 5, SUVmax ≥ 5) are at higher risk of relapse / progression after RT and should be carefully evaluated for alternative strategies*

- *The role of consolidation RT in 18FDG-PET/CT negative patients will be clarified in the next years by IELSG37 prospective trial*

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Grazie per l'attenzione...

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