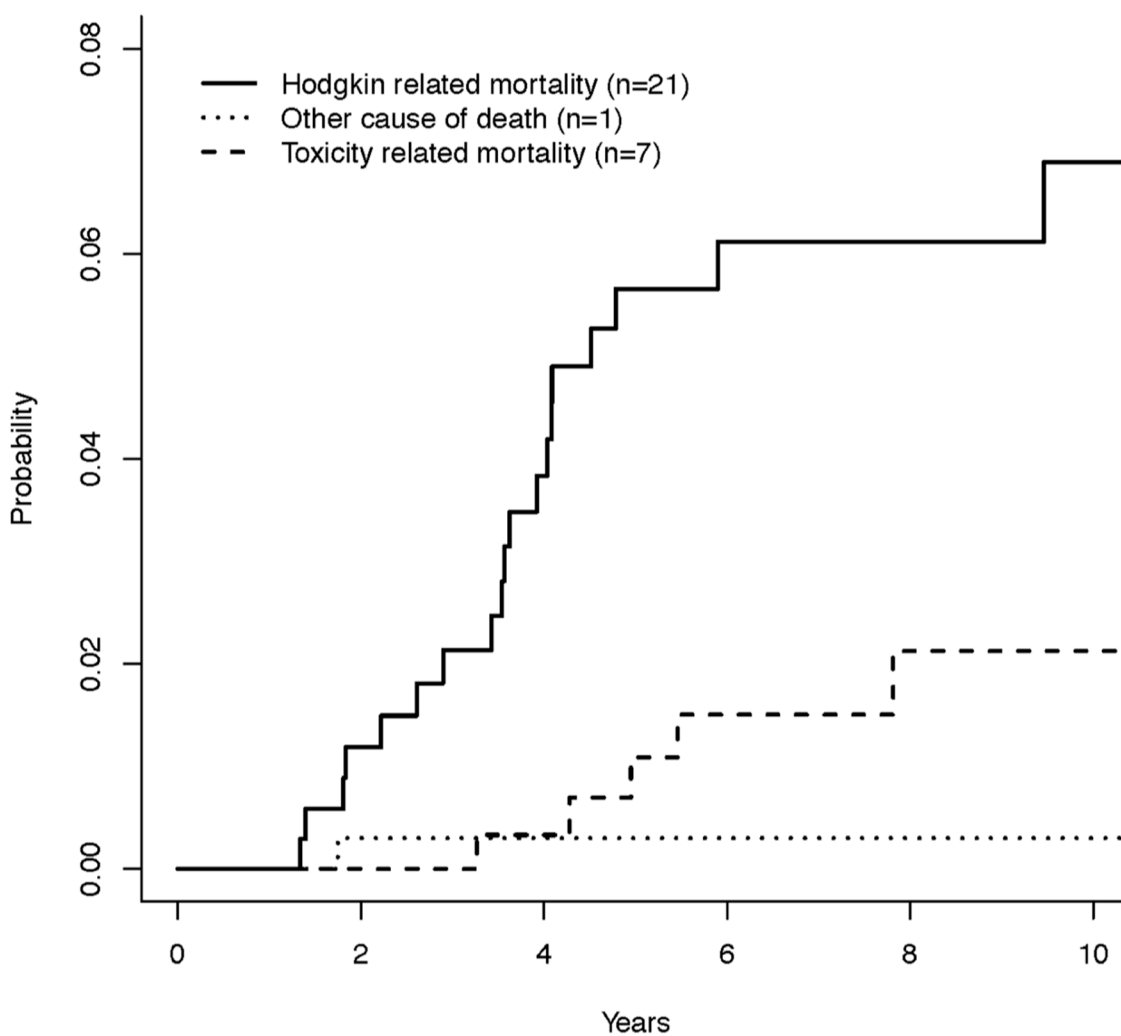


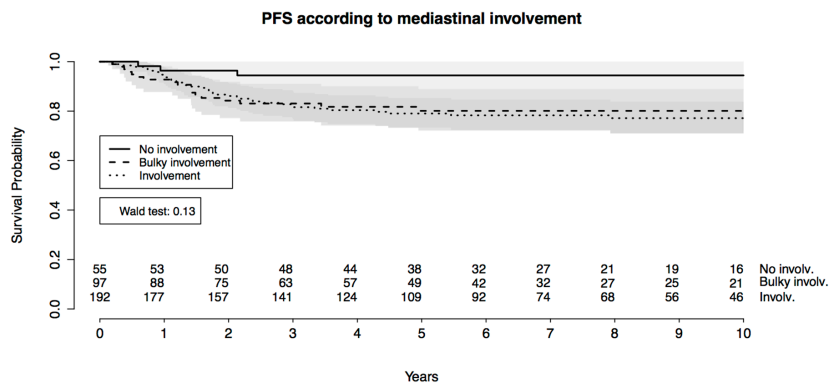
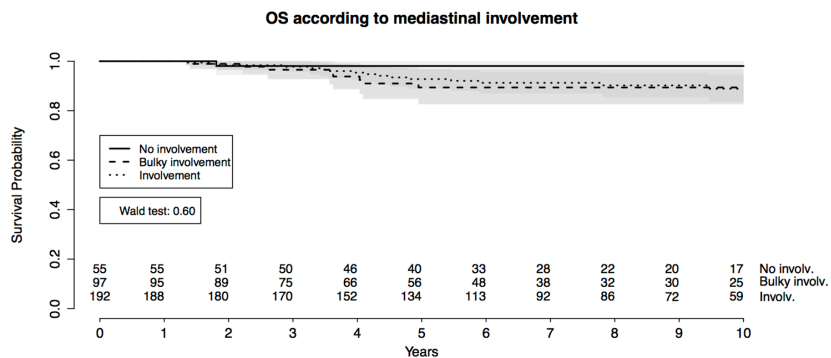
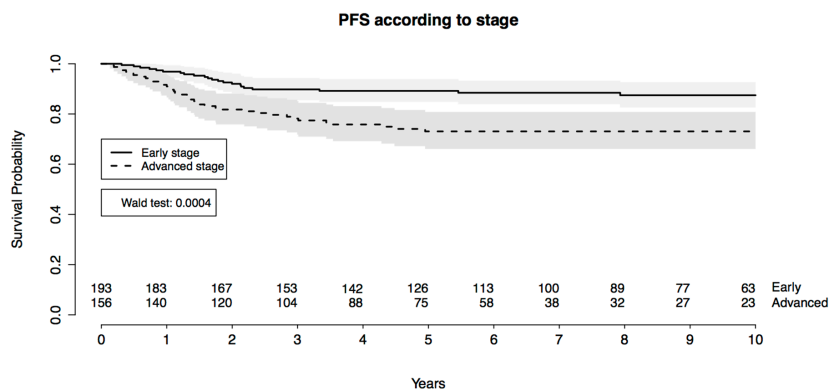
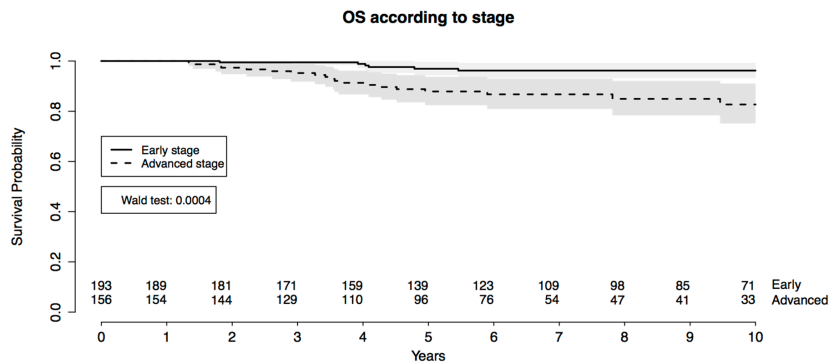
# Hodgkin lymphoma in adolescent and young adults: insights from an adult tertiary single-center cohort of 349 patients

## SUPPLEMENTARY MATERIALS

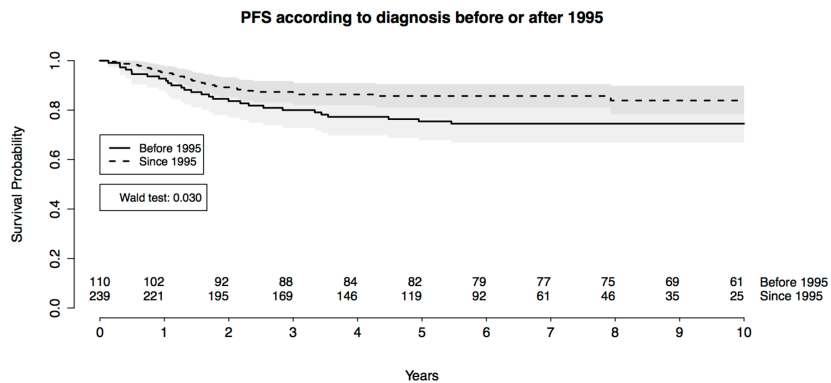
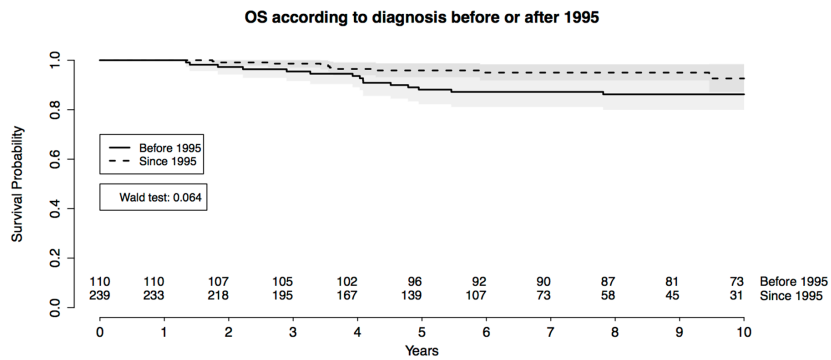
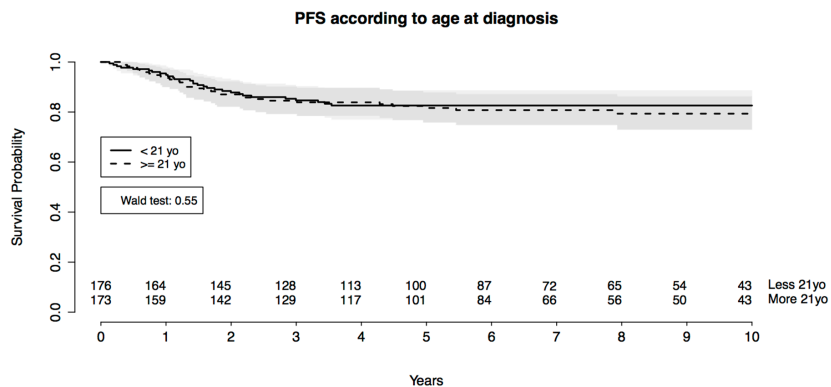
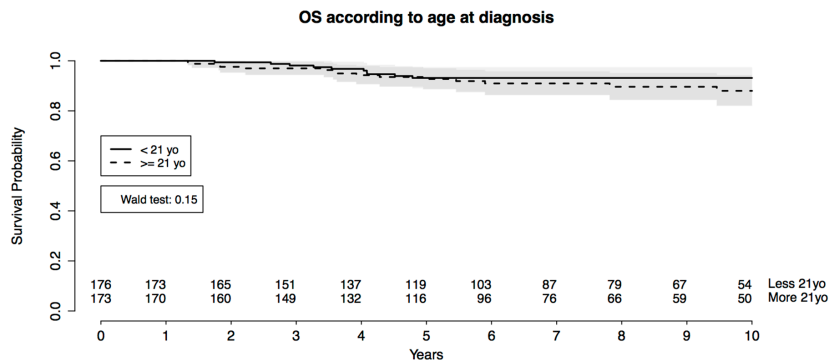
Cumulative incidence of Hodgkin/Toxicity or other cause mortality



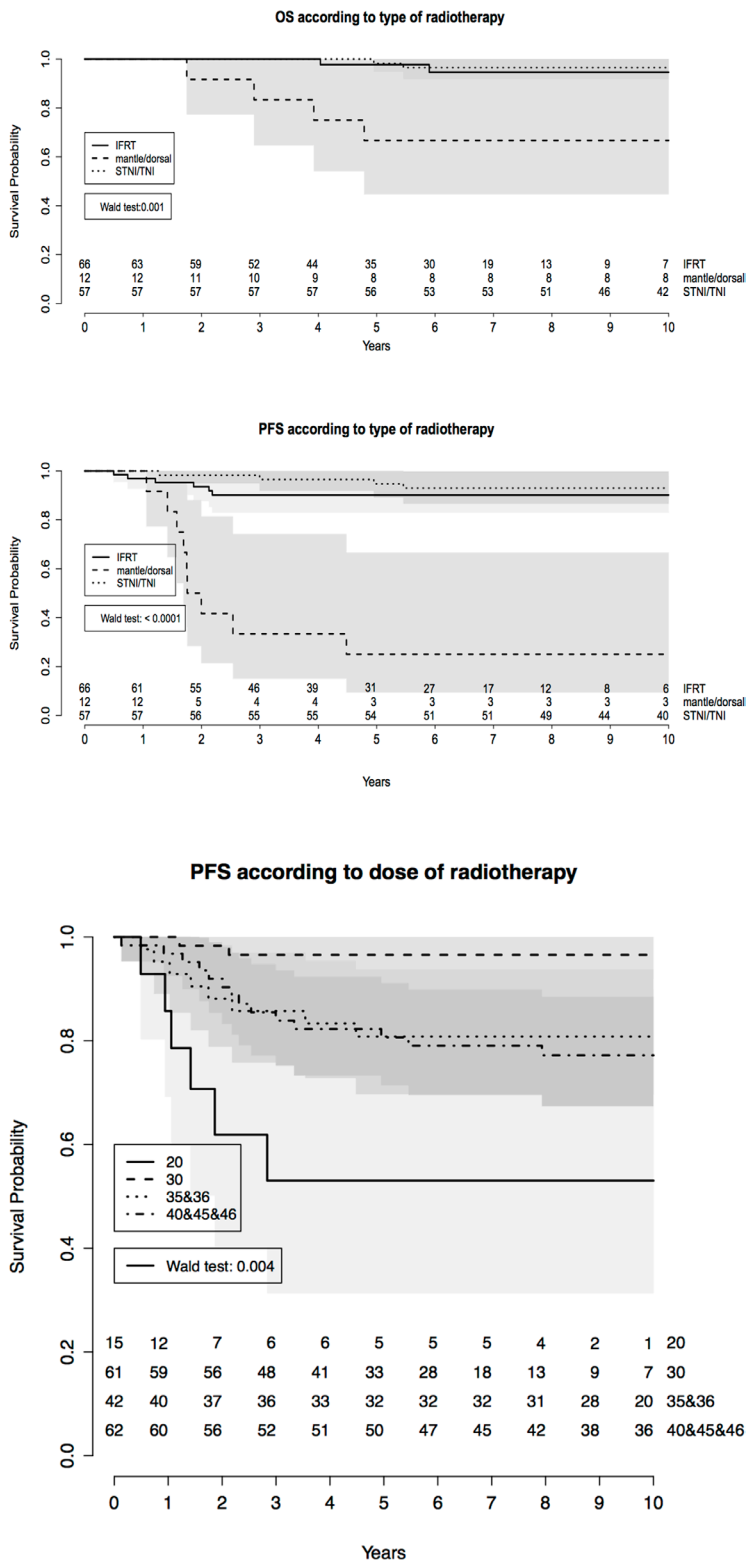
Supplementary Figure 1: Cumulative incidence of overall mortality.



(continued)



(continued)



Supplementary Figure 2: Comparisons of 10-year PFS and 10-year OS between patients with early stages vs. advanced stages, bulky vs. non bulky mediastinum, < 21-year old vs. ≥ 21-year old, diagnosis before and after 1995, type of radiotherapy and dose of radiotherapy.

Supplementary Table 1: Comparison between patients less than 21 years-old and patients over 21 years-old

HL characteristics at diagnosis	< 21 year-old (n = 176)	≥ 21 year-old (n=173)	p
<b>General characteristics</b>			
Female	100 (56.8 %)	101 (58.4 %)	0.83
Ann Arbor stage			0.83
Stage I and II	96 (54.6 %)	97 (56.1 %)	
Stage III and IV	80 (45.5 %)	76 (43.9 %)	
B symptoms	69 (44.2 %)	80 (47.6 %)	0.58
IPS for stage III-IV	2 [2-3]	2 [2-3]	0.45
Performance status			0.89
0	134 (78.8 %)	135 (79.9 %)	
≥1	36 (21.2 %)	34 (20.1 %)	
Histologic subtype			0.44
Nodular sclerosis	154 (88.0 %)	146 (84.9 %)	
Others	21 (12.0%)	26 (15.1%)	
Negative EBV-LMP staining	70 (89.7 %)	58 (77.3 %)	<b>0.049</b>
<b>Nodal involvement</b>			
Cervical nodes	152 (87.9 %)	142 (82.6 %)	0.18
Axillary nodes	41 (24.1 %)	34 (20.0 %)	0.43
Mediastinal nodes (including Bulky disease)			0.34
Absent	24 (14.0 %)	31 (18.0 %)	
Present	94 (54.7 %)	98 (57.0 %)	
Bulky disease	54 (31.4 %)	43 (25.0 %)	
Aortic nodes	43 (25.3 %)	41 (24.1 %)	0.90
Iliac nodes	6 (3.5 %)	6 (3.6 %)	1.00
Mesenteric nodes	14 (8.3 %)	12 (7.1 %)	0.84
Pelvic nodes	13 (7.7 %)	14 (8.3 %)	0.84
Spleen	33 (19.4 %)	25 (14.7 %)	0.31
<b>Extra-nodal involvement</b>			
Extra-nodal involvement	52 (32.7 %)	63 (38.7 %)	0.30
Lung	32 (18.8 %)	27 (15.9 %)	0.57
Pericardia	12 (7.1 %)	15 (8.9 %)	0.69
Bone	12 (7.5 %)	14 (8.7 %)	0.84
Pleura	11 (6.5 %)	15 (8.8 %)	0.54
Liver	3 (1.8 %)	7 (4.1 %)	0.22
Bone marrow	3 (1.8 %)	4 (2.5 %)	0.72
Oro-pharyngeal	1 (0.6 %)	2 (1.2 %)	1.00
Epiduritis	2 (1.2 %)	1 (0.6 %)	1.00
<b>Biological characteristics</b>			
Hemoglobin (g/dl)	12.0 [11.0-13.0]	12.3 [11.1-13.6]	0.22
Leukocytes (G/l)	11.4 [8.3-14.6]	10.3 [8.0-13.5]	0.15
Albumin (g/dl)	40.0 [36.0-43.3]	41.0 [38.0-45.0]	0.19
Lymphocytes (% of white cell count)	15.0 [10.0-21.0]	14.0 [11.0-20.0]	0.53
Neutrophils (% of white cell count)	75 [70.0-80.0]	75 [70.0-80.0]	0.70
Platelets	375.5 [298.5-459.5]	368 [289.3-430.0]	0.82
Lactate dehydrogenase (above normal range)	41 (32.0%)	39 (29.3 %)	0.69
Erythrocyte sedimentation rate (mm/hour)	53.0 [23.5-82.5]	52.0 [27.0-70.8]	0.32

Significant p are depicted in bold.

**Supplementary Table 2: Comparison between patients diagnosed before June 2005 and patients diagnosed after June 2005**

<b>HL characteristics at diagnosis</b>	<b>Diagnosis before June 2005 (n = 222)</b>	<b>Diagnosis after June 2005 (n = 127)</b>	<b>p value</b>
Histologic subtype, n (%)			<b>0.02</b>
Nodular sclerosis	183 (83.2 %)	117 (92.1 %)	
Others	37 (16.8 %)	10 (7.9 %)	
Ann Arbor stage, n (%)			<b>0.04</b>
Localized disease (stages I and II)	132 (59.5 %)	61 (48.0 %)	
Disseminated disease (stages III and IV)	90 (40.5 %)	66 (52.0 %)	
Performance status (%)			0.78
0	170 (79.8 %)	99 (78.6 %)	
≥ 1	43 (23.2 %)	27 (21.4 %)	
Cervical node involvement (%)	194 (89.0 %)	100 (78.7 %)	<b>0.01</b>
Axillary node involvement (%)	60 (28.2 %)	15 (11.8 %)	<b>&lt;0.01</b>
Mediastinal involvement			0.11
Absent	35 (16.1 %)	20 (15.8 %)	
Present	129 (59.5 %)	63 (49.6 %)	
Bulky	53 (24.4 %)	44 (34.7 %)	
Extra nodal involvement, n (%)	68 (34.7 %)	47 (37.3 %)	0.64
LDH (above normal range), n %	54 (32.1 %)	26 (28.0 %)	0.58

LDH: Lactate dehydrogenase.

Significant p are depicted in bold.

**Supplementray Table 3: Academic clinical trials in which patients have enrolled**

<b>Clinical trials</b>	<b>References</b>
LYSA H8 randomized trial	(Fermé <i>et al</i> , 2007)
EORTC/GELA H9 randomized trial	(Fermé <i>et al</i> , 2017)
LYSA H10 randomized trial	Not yet published
LYSA H89 randomized trial	(Ferme <i>et al</i> , 2006)
LYSA H3/4 randomized trial	(Carde <i>et al</i> , 2016; Mounier <i>et al</i> , 2014)

**Supplementary Table 4: First line treatment characteristics**

First line treatment	N (%) or median [IQR]	Available for
Chemotherapy		347
ABVD	209 (60.2 %)	
BEACOPP esc	53 (15.2 %)	
MOPP/ABV	39 (11.2 %)	
ABV/IMEP	11 (3.2 %)	
EBVP	11 (3.2 %)	
ABVPP	7 (2 %)	
MOPP	7 (2 %)	
OPPA	1 (0.3 %)	
others	9 (2.6 %)	
Radiotherapy	204 (58.5 %)	349
Type of radiotherapy		204
Involved field radiotherapy (IFRT)	66 (48.9 %)	
Subtotal nodal irradiation (STNI)	52 (38.6 %)	
Mantle field irradiation	11 (8.1 %)	
Total node irradiation (TNI)	5 (3.7 %)	
Dorsal irradiation	1 (0.7 %)	
Unknown	69	
Dose (gray)	36 [30 - 40]	182
Responses		349
Complete response	338 (96.8 %)	
Partial response or progression	11 (3.2 %)	



**Supplementary Table 5: Clinical characteristics at relapse/progression and management**

<b>Management at first relapse/ progression (n = 58)</b>	<b>N (%) or median [IQR]</b>	<b>Available for</b>
Ann Arbor stage at relapse/progression		45
Stages I and II	27 (60.0 %)	
Stage III and IV	18 (40.0 %)	
Time between relapse and first line treatment		57
median [IQR]	0.86 [0.40 – 1.75]	
< 1 year	35 (60.3 %)	
> 1 year	23 (39.7 %)	
Refractory HL	11 (19.0%)	58
Salvage chemotherapy regimens		57
MINEr	14 (24.6 %)	
IVOx	10 (17.5 %)	
MOPP	6 (10.5 %)	
COP/ABV	5 (8.8 %)	
DHAP	5 (8.8 %)	
ICE	3 (5.3 %)	
others	14 (24.6 %)	
Complementary radiotherapy	10 (17.2 %)	58
Autologous stem cell transplantation (ASCT), n (%)		58
After CR2	37 (63.8 %)	
After late remission	10 (17.2 %)	
Double ASCT	6 (10.3 %)	
Allogeneic stem cell transplantation, n (%)	7 (12.1 %)	58

CR2: complete remission after 2 chemotherapy regimens.

**Supplementary Table 6: Multivariate and univariate analysis of prognostic factors for progression free survival**

See Supplementary File 1