

**Supplementary Table 1.** Definitions of RECIST/Choi criteria used in the analyses of the images of computed tomography

<b>CRITERIA</b>	<b>RECIST 1.1</b>	<b>CHOI</b>
<b>CR</b>	Disappearance of all target lesions. Any pathological lymph nodes (whether target or non-target) must have reduction in short axis to <10 mm	Disappearance of all target lesion(s)
<b>PR</b>	Decrease $\geq 30\%$ in the sum of the diameters of target lesions taking as reference the baseline sum. No new lesion(s)	Decrease in tumor size $\geq 10\%$ or decrease in tumor density $\geq 15\%$ on CT
<b>SD</b>	Neither response nor progression. No new lesion(s)	Does not meet the criteria for CR, PR or PD
<b>PD</b>	Increase $\geq 20\%$ in the sum of the diameters of target lesions taking as reference the smallest sum measured during follow-up (nadir) and $\geq 5\text{mm}$ in absolute value and/or appearance of new unequivocally metastatic lesion(s)	Increase $\geq 10\%$ in tumor size and does not meet PR criteria by tumor density New lesions

Abbreviations: RECIST= Response Evaluation Criteria In Solid Tumors, CR= complete response, PR= partial response, SD= stable disease, PD= progressive disease.

**Supplementary Table 2.** Summary of effects of 6-month tumor response assessment on PFS/OS times

	Choi criteria	RECIST v1.1
12-month landmark PFS (CI 95%)		
PR	73.1 (58.6-85.8)	90.0 (73.2-100)
SD	61.9 (38.2-99.9)	65.8 (53.5-80.4)
PD	15.3 (6.6-29.1)	-
24-month landmark PFS (CI 95%)		
PR	40.4 (28.4-57.5)	48.0 (24.5-93.8)
SD	33.0 (11.8-92.6)	33.7 (23.3-50.2)
PD	8.1 (3.3-18.2)	-
12-month landmark OS (CI 95%)		
PR	100 (NA)	100 (NA)
SD	100 (NA)	94.8 (85.9-99.3)
PD	66.3 (51.3-81.7)	67.2 (50.4-83.4)
24-month landmark OS (CI 95%)		
PR	91.8 (83.3-100.0)	100 (NA)
SD	75.0 (54.1-100.0)	81.7 (69.6-91.1)
PD	50.1 (33.7-67.5)	48.1 (32.2-66.1)
Median PFS from the response assessment (months, CI 95%) ‡		
PR	14.2 (10.7-33.4)	18.1 (14.22-NA)
SD	9.7 (5.8-NA)	10.1 (8.2-21.7)
PD	1.0 (1.0-1.0)	-
Hazard ratio for PFS (CI 95%)		
PR	0.69 (0.29-1.61)	0.71 (0.31-1.66)
SD	Ref.	Ref.
PD	2.55 (1.09-5.96)	-
Hazard ratio for OS (CI 95%)		
PR	0.86 (0.34-2.16)	0.80 (0.30-2.11)
SD	Ref.	Ref.
PD	2.44 (0.99-5.97)	2.64 (1.46-4.78)

Abbreviations: PFS= progression-free survival, RECIST= Response Evaluation Criteria In Solid Tumors; CI= confidence interval, PR= partial response, SD= stable disease, PD=progressive disease, Ref.= reference category, NA= not available. ‡ The median PFS from time zero is calculated by adding the time from start to the time of CTs for response assessment.

**Supplementary Table 3.** Cox PH regression for PFS and OS as per RECIST/Choi at 3 months (univariate analysis)

<b>End point, PFS</b>	<b>HR (CI 95%)</b>	<b>P-value</b>
Choi		
PR	0.86 (0.39-1.89)	0.717
SD	Ref.	-
PD	2.89 (0.95-8.81)	0.060
RECIST v1.1		
PR	0.61 (0.25-1.46)	0.273
SD	Ref.	-
PD	-	-
<b>End point, OS</b>	<b>HR (CI 95%)</b>	<b>P-value</b>
Choi		
PR	0.63 (0.31-1.31)	0.223
SD	Ref.	-
PD	1.28 (0.58-2.83)	0.529
RECIST v1.1		
PR	1.26 (0.51-3.11)	0.611
SD	Ref.	-
PD	2.22 (1.13-4.25)	0.020

Abbreviations: Ref.= reference category, PR= partial response, SD= stable disease, PD= progressive disease, HR= hazard ratio.

**Supplementary Table 4.** Cox PH regression for PFS and OS evaluating the effect of TGR and AVR quantified at 3 and 6 months

3-month assessment				
	Univariate		Multivariate	
	End point, PFS by RECIST			
	HR (CI 95%)	P-value	HR (CI 95%)	P-value
DVR	0.98 (0.96-0.99)	0.011	-	-
TGR	0.99 (0.98-0.99)	0.005	0.99 (0.98-0.99)	0.022
AVR	0.98 (0.98-0.99)	0.030	0.99 (0.98-1.00)	0.259
	End point, OS			
	HR (CI 95%)	P-value	HR (CI 95%)	P-value
DVR	0.98 (0.98-1.01)	0.865	-	-
TGR	0.99 (0.99-1.01)	0.917	0.99 (0.98-1.01)	0.820
AVR	0.99 (0.98-1.01)	0.263	1.00 (0.99-1.00)	0.255
6-month assessment				
	End point, PFS by RECIST			
	HR (CI 95%)	P-value	HR (CI 95%)	P-value
DVR	0.87 (0.82-0.93)	<0.001	-	-
TGR	0.95 (0.93-0.97)	<0.001	0.96 (0.94-0.98)	0.001
AVR	0.95 (0.92-0.98)	0.001	0.97 (0.94-1.01)	0.204
	End point, OS			
	HR (CI 95%)	P-value	HR (CI 95%)	P-value
DVR	0.93 (0.87-0.98)	0.014	-	-
TGR	0.97 (0.95-0.99)	0.007	0.97 (0.95-0.99)	0.043
AVR	0.96 (0.92-1.00)	0.079	0.98 (0.94-1.02)	0.380

Abbreviations: HR= hazard ratio, AVR= attenuation variation rate, DVR= diameter variation rate, TGR= tumor growth rate, PFS= progression-free survival, OS= overall survival, CI= confidence interval.

## **Supplementary Table 5. Institutional ethics committees that have approved this study**

1 Hospital Universitario Central de Asturias

2 Hospital Universitario Morales Meseguer de Murcia

3 Hospital Universitario 12 de Octubre de Madrid

4 Hospital Universitario La Paz de Madrid

5 Hospital Universitario Ramón y Cajal de Madrid

6 Hospital Universitario Virgen del Rocío de Sevilla

7 Hospital Universitario Vall d'Hebron de Barcelona

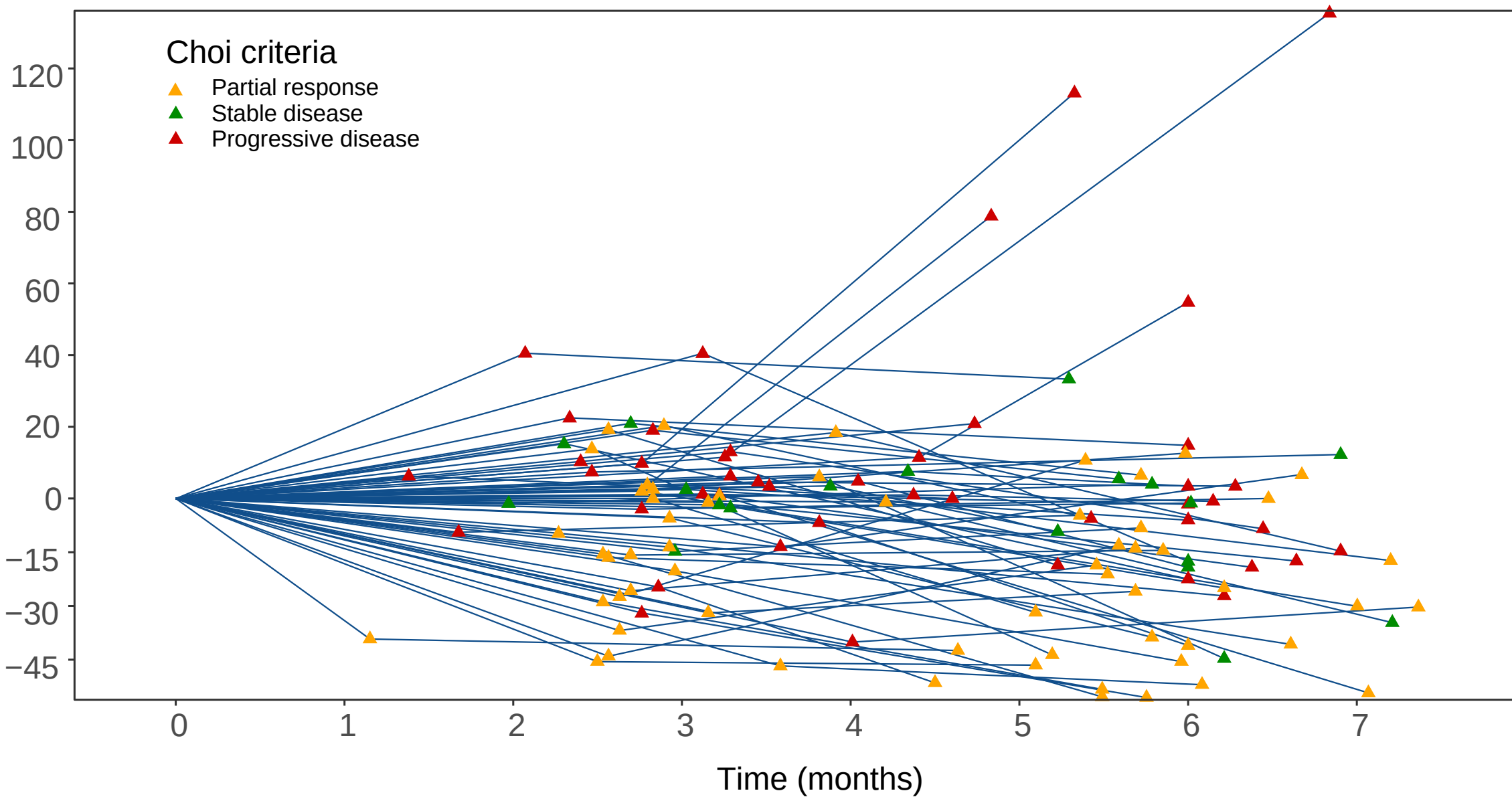
8 Hospital Universitario Miguel Servet de Zaragoza

9 Hospital Universitario Marqués de Valdecilla de Santander

10 Complejo Hospitalario de Navarra de Pamplona

**Supplementary Figure 1. Spider plots with size and attenuation variation.** Abbreviations: mm= millimeters, HU= Hounsfield units. 4A: size variation by Choi criteria, 4B: attenuation variation by RECIST

**A**



**B**

