

Autologous stem cell transplantation for progressive systemic sclerosis: a prospective non-interventional study from the European Society for Blood and Marrow Transplantation Autoimmune Disease Working Party

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Supplementary appendix

Table S1 : Inclusion / exclusion criteria and endpoints

Inclusion/ exclusion criteria

Inclusion criteria:

- a. Autologous HSCT
- b. Age between 18 and 65 years at time of transplant.
- c. Established diagnosis of progressive SSc according to ACR/EULAR-criteria

Exclusion criteria:

- Age <18 years at transplant
- Pregnancy or inadequate contraception
- Severe concomitant disease
 - Severe heart failure with Ejection Fraction < 40% by cardiac echo
 - Pulmonary arterial hypertension with systolic PAP > 50mm Hg
 - Kidney insufficiency: creatinine clearance <30ml/min (recommended: Cockcroft-Gault formula)
 - concurrent neoplasms or myelodysplasia
- Reduced lung function
 - FVC < 50% of normal
 - DLCO < 30%
- Previously damaged bone marrow
 - Leukopenia < 2,000/mm³
 - Thrombopenia < 100,000/mm³
- Uncontrolled severe infection (Hepatitis B/C, HIV, Salmonella carrier, syphilis, tuberculosis)
- Severe concomitant psychiatric illness (depression, psychosis)

Study endpoints

Primary end point:

Progression free survival (PFS), defined as survival since Baseline (the 1st day of mobilisation) without evidence of progression of SSc.

Progression is defined as any of the following changes from baseline:

- Death from SSc
- 10% drop in FVC and/or ≥ 15% drop in DLCO (of predicted values)
- 15% drop in LVEF by echo or MUGA
- 15% drop in body weight
- 30% drop in creatinine clearance
- 25% increase in modified Rodnan skin score (mRSS)
- 0.5 increase in SHAQ

Secondary end points:

Safety

Treatment related toxicity throughout the study period

Incidence of Adverse Events (AE) and Serious Adverse Events (SAE)

Neutrophil and platelet engraftment, defined as first day after transplantation with absolute neutrophil count > 500 cells/ μ L and >20.000 platelets/ μ L without platelet transfusion, respectively

Overall Survival

Response to treatment

Response to treatment within 1 year following autologous HSCT, defined as

- 25% improvement in mRSS and/or
- ≥10% improvement in DLCO or FVC

as compared to baseline without need of further immunosuppression

Improvement in Quality of life assessed by SHAQ evolution (Scleroderma Health Assessment Questionnaire)

100-day Treatment related mortality (TRM) defined as any death during 100 day following transplant that cannot be attributed to progression or relapse of the disease.

Table S2: Representatives from participating center, in alphabetic order according to city

Montserrat Rovira	Hematology	Barcelona	Spain
Gerard Espinosa	Rheumatology	Barcelona	Spain
Jakob Passweg	Hematology	Basel	Switzerland
Thomas Daikeler	Rheumatology	Basel	Switzerland
Roland Schroers	Hematology	Bochum	Germany
Lars Petersen	Rheumatologist	Bochum	Germany
Jacques Olivier Bay	Hematology	Clermont Ferrand	France
W.A. Marijt	Hematology	Leiden	The Netherlands
Hans Ulrich Scherer	Rheumatology	Leiden	The Netherlands
Francesco Onida	Hematology	Milan	Italy
Nicoletta Del Papa	Rheumatology	Milan	Italy
Zora Marjanovic	Hematology	Paris (Saint Antoine)	France
Dominique Farge	Internal medicine	Paris (Saint Louis)	France
David Michauneau	Hematology	Paris (Saint Louis)	France
Belinda Simoes	Hematology	Ribeirao Preto	Brazil
Maria Carolina Oliveira	Rheumatology	Ribeirao Preto	Brazil
Bruno Lioure	Hematology	Strasbourg	France
Thierry Martin	Rheumatology	Strasbourg	France
Anne Huynh	Hematology	Toulouse	France
Gregory Pugnet	Rheumatology	Toulouse	France
Lothar Kanz	Hematology	Tuebingen	Germany
Joerg Henes	Rheumatology	Tuebingen	Germany
Marc Schmalzing	Rheumatology	Würzburg	Germany

Table S3 : Comparison of infections within the first 100d following aHSCT and CD34+-selection, CYC dose at time of mobilization and use of post-transplant G-CSF

	Infection within the first 100 days		
	No	Yes	p. value
CD34+ selection			
No	10 (22.2%)	35 (77.8%)	p= 0.44
Yes	11 (31.4%)	24 (68.6%)	
CYC dose at mobilisation			
2 g/m ²	16 (35.6%)	29 (64.4%)	p= 0.16
4 g/m ²	4 (16.7%)	20 (83.3%)	
G-CSF post transplant			
No	14 (31.1%)	31 (68.9%)	p= 0.32
Yes	7 (20.6%)	27 (79.4%)	