Ongoing graft-versus-host disease is a risk factor for azoospermia after allogeneic hematopoietic stem cell transplantation: a survey of the Late Effects Working Party of the European Group for Blood and Marrow Transplantation

Alicia Rovó,¹ Mahmoud Aljurf,² Sandra Chiodi,³ Simonetta Spinelli,³ Nina Salooja,⁴ Gülsan Sucak,⁵ Ann Hunter,⁶ Tan Swee Kim,⁻ Gérard Socié,⁵ Maria Teresa van Lint,³ Jakob R. Passweg,⁶ Mutlu Arat,¹⁰ Manuela Badoglio,¹¹ and André Tichelli¹ on behalf of the Late Effects Working Party of the EBMT

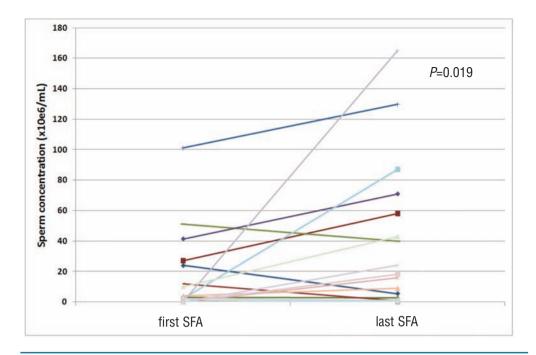
¹University Hospital of Basel, Basel, Switzerland; ²King Faisal Specialist Hospital and Research Center, Riyadh, Saudi Arabia; ³Ospedale San Martino, Genova, Italy; ⁴Hammersmith Hospital, London, UK; ⁵Gazi Universitesi Tip Fakültesi Hastanesi, Ankara, Turkey; ⁶University Hospitals of Leicester NHS Trust, Leicester, UK; ⁷Hospital Amphang Jalan Mewah Utara Pandan, Kuala Lumpur, Malaysia; ⁶Paris VII Hospital Saint Louis, Paris, France; ⁶Hôpitaux Universitaires de Genève, Switzerland; ¹⁰Florence Nightingale Sisli Hospital, Istanbul, Turkey; and ¹¹EBMT Study Office, AP-HP, UPMC Univ Paris, France

©2013 Ferrata Storti Foundation. This is an open-access paper. Haematologica 2013;98. doi:10.3324/haematol.2012.071944

Online Supplelemtary Table S1. Analysis of first and last SFA in patients with more than one SFA after HSCT.

	First SFA	Last SFA	P
N. of patients with at least 2 SFA after HSCT	58	58	
Median time interval in months between HSCT and SFA (range)	49 (1 - 269)	87 (28 – 275)	-
Time interval between first and last SFA	24 month		
Sperm analysis			< 0.0001
Normozoospermia (>20x10 ⁶ /mL)	7 (12%)	9 (15%)	
Oligozoospermia (5-20x10 ⁶ /mL)	1 (2%)	3 (5%)	
Severe oligozoospermia(<5x10 ⁶ /mL)	4 (7%)	6 (10%)	
Cryptospermia (Sperm presence only after centrifugation)	3 (5%)	4 (7%)	
Azoospermia (No sperm)	43 (74%)	36 (62%)	

		Patients without improvement between both SFAs	Patients with improvement between both SFAs	P
N. of patients		46	12	
Age > 25 years at HSCT	12	7 (15%)	5 (42%)	0.102
Time interval in months between first and last SFA		19 (1.5-100)	31 (15-140)	0.015
TBI	43	36 (80%)	7 (58%)	0.144
Acute GVHD	33	24 (52%)	9 (82%)	0.097
Chronic GVHD	33	24 (52%)	9 (82%)	0.97
GVHD at time of last SFA	20	14 (32)	6 (54%)	0.159
Immunosuppression at time of last SFA	14	10 (23%)	4 (36%)	0.299



Online Supplementary Figure S1. Sperm concentration at first and last sperm analysis after HSCT from 58 patients with two or more sperm collections after HSCT. Sperm concentration is significantly lower at first compared to second sperm analysis (*P*=0.019); 36 patients were azoospermic in first and last sperm analysis (SFA).