

Related peripheral blood stem cell donors experience more severe symptoms and less complete recovery at one year compared to unrelated donors

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SUPPLEMENTAL TABLES

Supplemental Table 1. Classification of comorbidities in related and unrelated BM and PBSC donors. (Note that by definition, there are no “present, decline” donors in the URD group. The URD cohort were all accepted for donation.)

	Unrelated Donors ^a		Related Donors ^a		Related Donors ^b			
					Absent	Present, Accept	Present, Indeterminate	Present, Defer
	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)		
BM donors								
Number of donors	2553	126	64 (51)	22 (17)	29 (23)	11 (9)		
Cardiovascular	177 (7)	22 (17)	104 (83)	6 (5)	13 (10)	3 (2)		
CNS / psychiatric	284 (11)	16 (13)	110 (87)	3 (2)	11 (9)	2 (2)		
Pulmonary	189 (7)	13 (10)	113 (90)	2 (2)	9 (7)	2 (2)		
Gastrointestinal	180 (7)	11 (9)	115 (91)	11 (9)	0	0		
Endocrine	77 (3)	8 (6)	118 (94)	5 (4)	3 (2)	0		
Genitourinary	74 (3)	4 (3)	122 (97)	2 (2)	1 (1)	1 (1)		
Hematologic	36 (1)	3 (2)	123 (98)	2 (2)	1 (1)	0		
Hemorrhage	31 (1)	2 (2)	124 (98)	1 (1)	0	1 (1)		
Autoimmune disease	50 (2)	2 (2)	124 (98)	2 (2)	0	0		
Liver disease	15 (1)	2 (2)	124 (98)	1 (1)	0	1 (1)		
PBSC donors								
Number of donors	8307	956	403 (42)	171 (18)	297 (31)	85 (9)		
Cardiovascular	725 (9)	225 (24)	731 (76)	38 (4)	169 (18)	18 (2)		
Endocrine	300 (4)	134 (14)	822 (86)	72 (8)	62 (6)	0		
CNS / psychiatric	930 (11)	128 (13)	828 (87)	14 (1)	110 (12)	4 (<1)		
Gastrointestinal	510 (6)	124 (13)	832 (87)	107 (11)	10 (1)	7 (1)		
Pulmonary	612 (7)	87 (9)	869 (91)	28 (3)	57 (<1)	2 (<1)		
Genitourinary	236 (3)	35 (4)	921 (96)	19 (2)	13 (1)	3 (<1)		
Hematologic	54 (1)	25 (3)	931 (97)	10 (1)	3 (<1)	12 (1)		
Hemorrhage	79 (1)	22 (2)	934 (98)	21 (2)	1 (<1)	0		
Autoimmune disease	32 (<1)	19 (2)	937 (98)	1 (<1)	3 (<1)	15 (2)		
Liver disease	45 (1)	15 (2)	941 (98)	11 (1)	1 (<1)	3 (<1)		

^a Column percent

^b Row percent

Supplemental Table 2. Association between central venous line placement and donor age, BMI, and the number of days of collection, by donor sex, after first-time PBSC collection in RD and URD.

Variable	Male				Female			
	N donors	# with CVL	(% CVL)	p-value	N donors	# with CVL	(% CVL)	p-value
First-time PBSC RD								
Donor age at donation				0.319				0.824
18 to 29	53	7	(13)		49	17	(35)	
30 to 39	80	6	(8)		55	23	(42)	
40 to 49	140	15	(11)		114	41	(36)	
50 or older	264	39	(15)		201	79	(39)	
Donor BMI				0.755				<0.001
Underweight and Normal	90	11	(12)		122	42	(34)	
Overweight	205	24	(12)		120	33	(28)	
Obese	213	30	(14)		155	77	(50)	
Number of days of collection				0.065				0.002
1 day	396	50	(13)		250	78	(31)	
2 days	129	13	(10)		154	74	(48)	
≥ 3 days	12	4	(33)		15	8	(53)	
First-time PBSC URD								
Donor age at donation				0.015				0.381
18 to 29	2697	59	(2)		1314	214	(16)	
30 to 39	1383	23	(2)		708	115	(16)	
40 to 49	902	23	(3)		618	113	(18)	
50 or older	359	16	(4)		326	64	(20)	
Donor BMI				<0.001				<0.001
Underweight and Normal	1591	15	(1)		1359	206	(15)	
Overweight	2239	50	(2)		825	127	(15)	
Obese	1508	56	(4)		780	172	(22)	
Number of days of collection				0.356				<0.001
1 day	5006	111	(2)		2472	449	(18)	
2 days	335	10	(3)		494	57	(12)	

Abbreviation: CVL, central venous line

Supplemental Table 3. Univariate comparisons of skeletal pain and MTC symptoms experienced by first time related vs unrelated bone marrow donors.

Event and time point	Related Donors				Unrelated Donors				p-value ^b
	N	n	Rate	(95% CI ^a)	N	n	Rate	(95% CI ^a)	
<i>Skeletal pain</i>									
Grade 2-4 at pre-donation	126	3	2.38	(0.49-6.80)	2553	14	0.55	(0.30-0.92)	0.043
Grade 3-4 at pre-donation	126	0	0.00	(0.00-2.89)	2553	0	0.00	(0.00-0.14)	
Grade 2-4 at collection	122	44	36.07	(27.57-45.25)	2553	801	31.37	(29.58-33.21)	0.274
Grade 3-4 at collection	122	12	9.84	(5.19-16.55)	2553	16	0.63	(0.36-1.02)	<0.001
Grade 2-4 at one year	97	10	10.31	(5.06-18.14)	944	49	5.19	(3.86-6.80)	0.060
Grade 3-4 at one year	97	1	1.03	(0.03-5.61)	944	10	1.06	(0.51-1.94)	1.000
<i>Common toxicities</i>									
Grade 2-4 at pre-donation	124	1	0.81	(0.02-4.41)	2553	13	0.51	(0.27-0.87)	0.486
Grade 3-4 at pre-donation	124	0	0.00	(0.00-2.99)	2553	2	0.08	(0.01-0.28)	1.000
Grade 2-4 at collection	121	29	23.97	(16.68-32.57)	2553	432	16.92	(15.49-18.43)	0.049
Grade 3-4 at collection	121	4	3.31	(0.91-8.25)	2553	9	0.35	(0.16-0.67)	0.002
Grade 2-4 at one year	97	7	7.22	(2.95-14.30)	945	38	4.02	(2.86-5.48)	0.181
Grade 3-4 at one year	97	1	1.03	(0.03-5.61)	945	11	1.16	(0.58-2.07)	1.000

^a Exact confidence interval

^b Fisher's Exact Test p-value

Supplemental Table 4. Univariate comparisons of skeletal pain and MTC symptoms experienced by first time related vs unrelated PBSC donors.

Event and time point	Related Donors				Unrelated Donors				p-value ^b
	N	n	Rate	(95% CI ^a)	N	n	Rate	(95% CI ^a)	
<i>Skeletal pain</i>									
Grade 2-4 at pre-donation	956	79	8.26	(6.60-10.19)	8307	76	0.91	(0.72-1.14)	<0.001
Grade 3-4 at pre-donation	956	17	1.78	(1.04-2.83)	8307	2	0.02	(0.00-0.09)	<0.001
Grade 2-4 on collection day 1	950	415	43.68	(40.50-46.91)	8302	3089	37.21	(36.17-38.26)	<0.001
Grade 3-4 at collection day 1	950	138	14.53	(12.35-16.93)	8302	143	1.72	(1.45-2.03)	<0.001
Grade 2-4 at one year	775	112	14.45	(12.05-17.13)	2753	153	5.56	(4.73-6.48)	<0.001
Grade 3-4 at one year	775	24	3.10	(1.99-4.57)	2753	10	0.36	(0.17-0.67)	<0.001
Non-recovery to pre-donation level at one year	775	525	32.26	(29.98-35.68)	2753	2127	22.74	(21.18-24.35)	<0.001
<i>Common toxicities</i>									
Grade 2-4 at pre-donation	933	23	2.47	(1.57-3.68)	8306	43	0.52	(0.37-0.70)	<0.001
Grade 3-4 at pre-donation	933	6	0.64	(0.24-1.39)	8306	9	0.11	(0.05-0.21)	0.002
Grade 2-4 on collection day 1	951	172	18.09	(15.69-20.68)	8302	752	9.06	(8.45-9.70)	<0.001
Grade 3-4 at collection day 1	951	31	3.26	(2.23-4.60)	8302	33	0.40	(0.27-0.56)	<0.001
Grade 2-4 at one year	777	48	6.18	(4.59-8.11)	2753	99	3.60	(2.93-4.36)	<0.001
Grade 3-4 at one year	777	6	0.77	(0.28-1.67)	2753	22	0.80	(0.50-1.21)	0.297
Non-recovery to pre-donation level at one year	756	629	16.80	(14.20-19.66)	2753	2421	12.06	(10.87-13.33)	<0.001

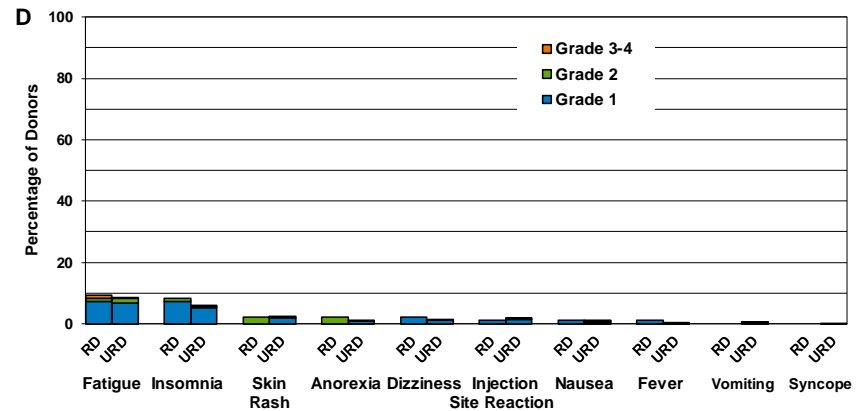
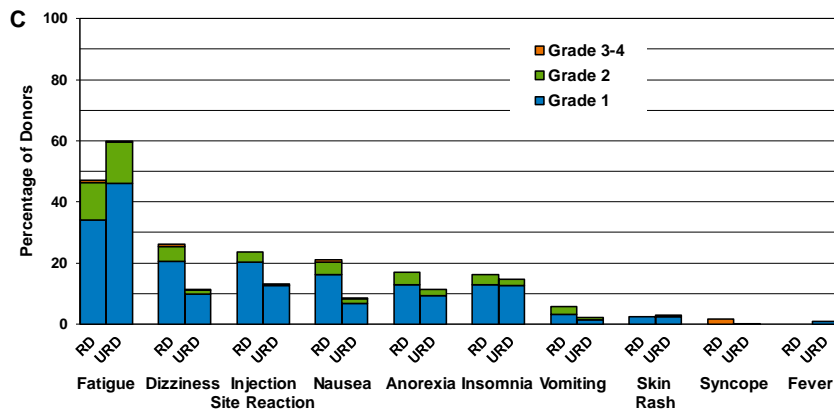
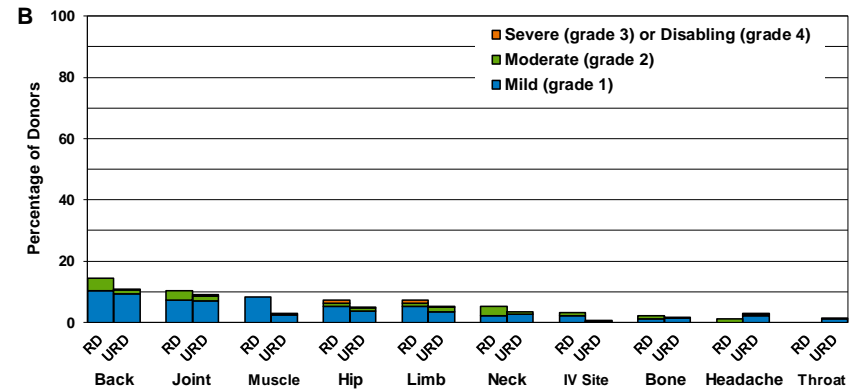
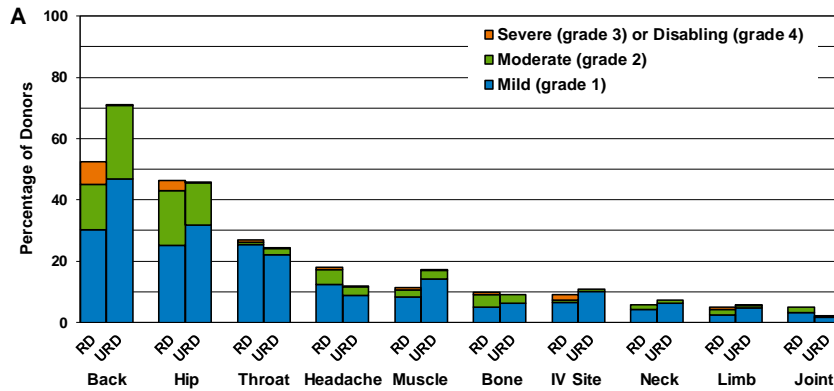
^a Exact confidence interval

^b Fisher's Exact Test p-value

SUPPLEMENTAL FIGURES

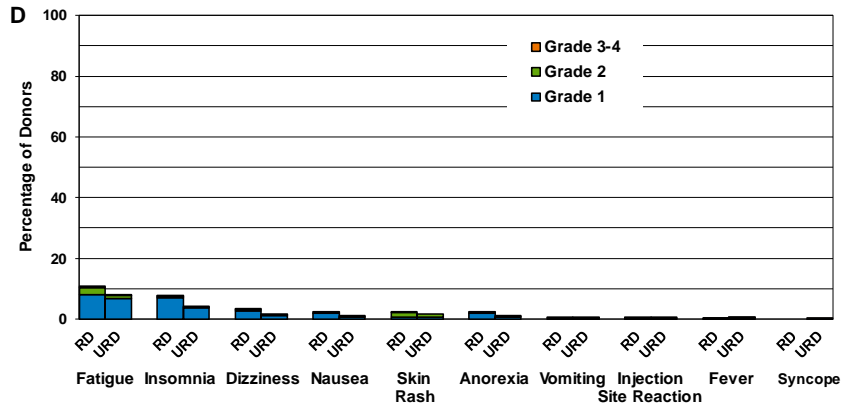
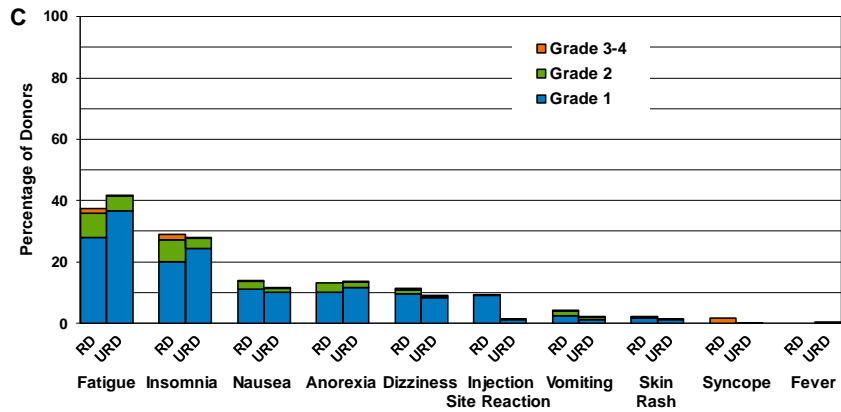
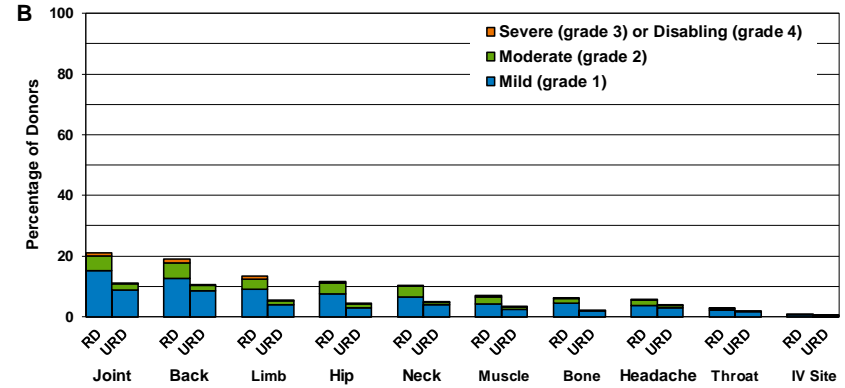
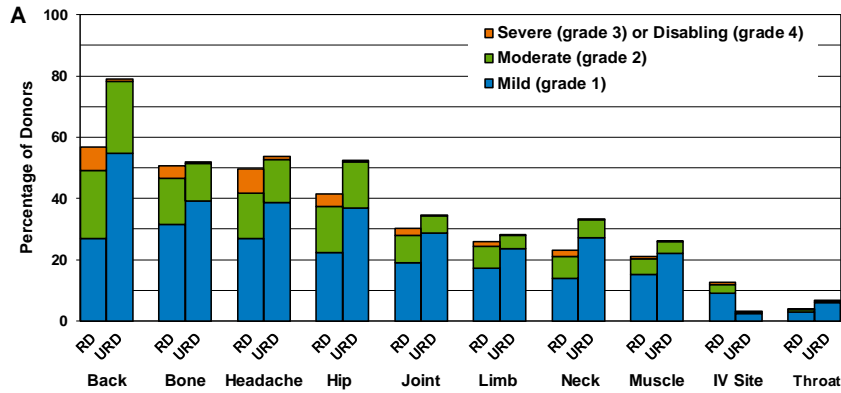
Supplemental Figure 1. Sites of pain and body symptoms experienced by first time related vs. unrelated bone marrow donors at 2 days and one year post-donation.

- A. Sites of pain at 2 days post-donation.
- B. Sites of pain at one year post-donation.
- C. Body symptoms at 2 days post-donation.
- D. Body symptoms at one year post-donation.

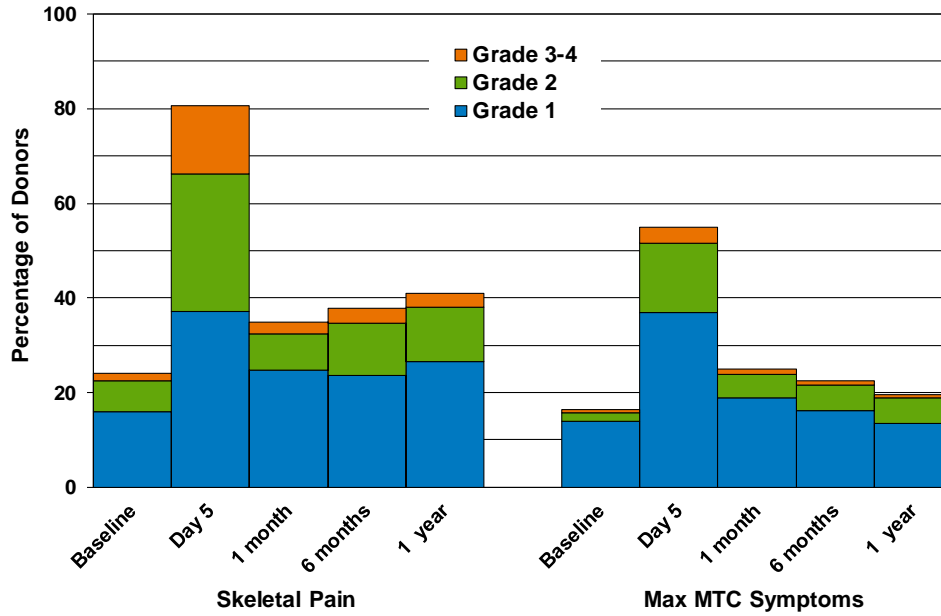


Supplemental Figure 2. Sites of pain and body symptoms experienced by first time related vs. unrelated PBSC donors on the first day of collection prior to apheresis and at one year post-donation.

- A. Sites of pain on the first day of collection prior to apheresis.
- B. Sites of pain at one year post-donation.
- C. Body symptoms on the first day of collection prior to apheresis.
- D. Body symptoms at one year post-donation.



Supplemental Figure 3. Severity of skeletal pain and highest toxicity level across key body symptoms experienced by first time related PBSC donors at baseline, on the first day of collection prior to apheresis, and post-donation.



Supplemental Figure 4. Quartiles of SF Physical Scores by skeletal pain severity and MTC symptoms level at one month and one year post-donation.

