

Supplementary Table 1: Subsequent neoplasms: Individual SN cases with associated primary NMD, conditioning, and cGvHD. Of note: 19 out of the 20 cases of cGVHD were diagnosed prior to SN development. For one patient with both SN and cGVHD, the timing of cGVHD development was not reported.

Case number	TBI, Yes/No; dose (cGY)	Busulfan, Yes/No; dose (mg)	Conditioning (other)	cGVHD	cGVHD organ	SN subtype, (N= 71)	Time to SN (years)	Age at SN
Severe Aplastic Anemia (SAA)								
1	Yes, 200	No	cy + flu	No		Genitourinary	0.8	18
2	Yes, 200	No	cy	No		Melanoma*	0.0	10
3	No	No	cy	Yes	Skin, eyes, oral, pulmonary, MSK, GI, GU	Sarcoma*	1.2	19
4	Yes, 200	No	cy	Yes	Skin, GI	Non-melanoma skin	7.2	12
5	Yes, 1200	No	cy	No		Sarcoma	17.9	19
6	No	No	cy	No		Genitourinary*	2.8	18
7	No	No	cy	Yes	Eyes, oral	Non-melanoma skin*	2.9	23
8	No	No	cy	No		Breast	0.7	18
9	No	No	cy	No		MDS	10.2	30
10	No	No	cy	No		Thyroid	6.8	11
11	No	No	cy	No		AML*	1.4	5
12	No	No	cy	No		ALL*	3.6	16
13	No	No	cy	No		AML	7.5	19
14	Yes, 200	No	cy + flu	Yes	Skin	MDS*	5.4	10
15	No	No	cy	No		MDS*	4.0	10
16	No	No	cy	No		Thyroid*	5.8	12
Fanconi Anemia (FA)								
17	Yes, 450	No	cy + flu	Yes	Skin, oral	OP, mouth*	10.0	16
18	Yes, 450	No	cy + flu	No		OP, NOS*	14.8	23
19	Yes, 450	No	cy + flu	Yes	Skin	Non-melanoma skin	8.6	16
20	Yes, 450	No	cy + flu	Yes	Skin, eyes, oral, GI	OP, NOS*	8.2	16
21	Yes, 300	No	cy + flu	No		OP, mouth	1.0	20
22	Yes, 450	No	cy + flu	Yes	Skin, eyes, oral	OP, hypopharynx*	15.8	33
23	Yes, 450	No	cy	Yes	Skin, oral	OP, tongue*	13.6	21
24	No	No	cy	Yes	Skin, GI	OP, tongue*	14.5	24
25	Yes, 450	No	cy	Yes	GI	Sarcoma*	10.1	14
26	Yes, 400	No	cy + flu	Yes	Oral, GI	Nose, sinuses*	5.3	15
27	No	No	cy	Yes	Skin, oral, liver	OP, NOS	13.4	25
28	No	No	cy + flu	Yes	Skin, eyes, oral, lung, liver, GI, GU	OP, NOS	9.0	16
29	No	No	cy	Yes	Skin, eyes, oral, liver	OP, NOS	5.1	15
30	No	No	cy	No		Genitourinary	10.6	24
31	No	No	cy	No		OP, NOS	17.6	25
32	No	No	cy	No		OP, NOS	11.2	29
33	No	No	cy	Yes	Skin, eyes, oral, GI, liver	OP, NOS	5.0	11
34	No	No	cy	No		CNS	12.8	19
35	No	No	cy	No		OP, NOS	8.2	16
36	No	No	cy + flu	No		AML*	3.9	9
37	Yes, 450	No	cy + flu	No		Non-melanoma skin*	7.9	13
38	No	No	cy	No		AML	2.2	9

39	No	No	cy	No		OP, NOS	18.5	29
40	No	No	cy	No		Other, unspecified	18.1	28
41	No	No	cy	No		Sarcoma	13.3	24
42	No	No	cy	No		Genitourinary*	9.1	21
43	No	No	cy	No		Genitourinary	9.1	22
44	Yes, 450	No	cy	No		ALL	2.7	11
45	Yes, 450	No	cy + flu	No		OP, tongue*	8.5	19
46	Yes, 450	No	cy + flu	Yes	Skin, oral, GI, Gu	Gastrointestinal*	6.1	11
47	Yes, 450	No	cy	No		MDS*	0.7	13

Marrow Failure (other)								
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48	Yes, 1000	No	cy + vp16	No		Other, unspecified	14.6	32
49	No	Yes, 120	cy + flu	Yes	Skin, oral	Non-melanoma skin	2.9	13
50	Yes, 1200	No	cy + other	No	Skin, GI, liver	OP, tongue*	10.4	22
51	No	Yes, 150	cy	No		Sarcoma*	16.5	19
52	No	Yes, 192	cy	No		Sarcoma	8.0	9
53	Yes, 200	No	cy + flu	No		AML*	0.8	5

Sickle Cell Disease								
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54	Yes, 200		flu	No		MDS*	10.0	13
55	No	Yes, 362	cy	No		Other, unspecified	0.8	4
56	Yes, 300	No	cy + flu	No		MDS*	4.5	6

Primary Immunodeficiency (PID): Severe Combined Immunodeficiency Syndrome (SCID) and Non-SCID								
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57	No	No	flu + mel	No		MDS	3.8	8
58	No	No	none	No		Sarcoma*	7.9	8
59	Yes, 1332	No	cy + Ara-C	No		MDS	3.7	4
60	No	Yes, 384	cy	No		GI*	7.0	15
61	No	Yes, 556	cy	No		AML*	0.8	12

Leukodystrophy, Osteopetrosis and Metabolic Disorders								
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62	Yes, 750	Yes, 368	cy	Yes	Skin, eyes, liver, MSK	Thyroid*	9.1	19
63	No	Yes, 832	cy	No		Thyroid	6.9	20
64	Yes, 900	Yes, 112	cy	No		Thyroid*	13.5	14
65	No	Yes, 208	cy	No		Melanoma*	7.7	9
66	No	Yes, 288	cy	Yes	Skin, GI	Non-melanoma skin	7.2	13

Histiocytic Disorders								
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67	No	Yes, 75	cy + vp16	No		Non-melanoma skin	11.3	11
68	No	Yes, 208	cy + vp16	No		AML*	1.2	3
69	No	Yes, 186	cy + vp16	No		AML	3.5	4
70	No	Yes, 280	cy + vp16	No		CNS	9.7	13
71	No	Yes, 160	cy + vp16	No		ALL	0.9	7

*Subsequent neoplasm confirmed by pathology report

Abbreviations: SN: subsequent neoplasm; NMD: non-malignant disease; cGVHD: chronic graft-versus-host disease; TBI: total body irradiation; cGy: centigray; cy: cyclophosphamide; flu: fludarabine; vp-16: etoposide; Ara-C: cytarabine; mel: melphalan; cGVHD: chronic graft-versus-host disease; MSK: musculoskeletal; GI: gastrointestinal; GU: genitourinary; SN: subsequent neoplasm; MDS: myelodysplastic syndrome; AML: acute myeloid leukemia; ALL: acute lymphoblastic leukemia; OP: oropharyngeal; NOS: not-otherwise specified; CNS: central nervous system