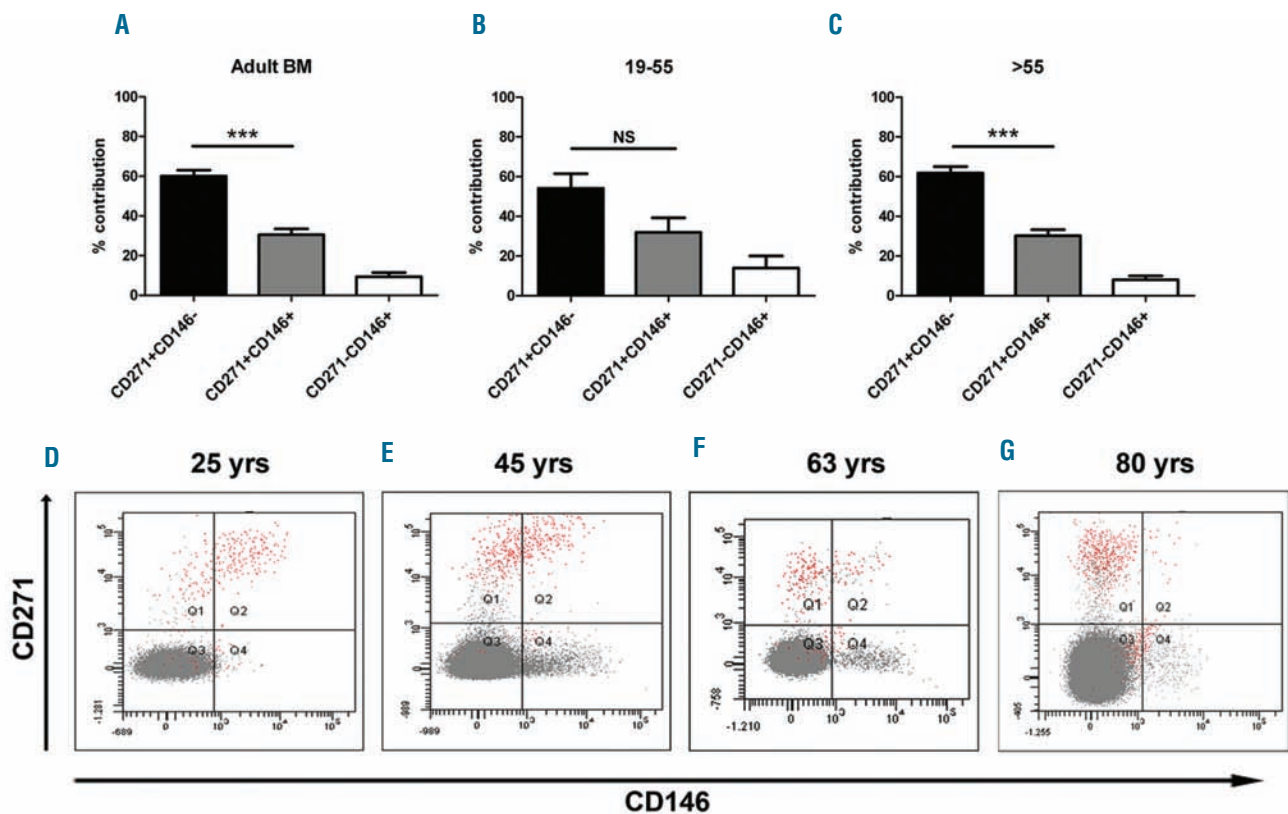


The composition of the mesenchymal stromal cell compartment in human bone marrow changes during development and aging

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Online Supplementary Figure S1. Relative increase of CD271^{bright}CD146⁻ MSC in adult BM with increasing age. (A) Relative frequency of CD271^{bright}CD146⁻, CD271^{bright}CD146⁺ and CD271⁻CD146⁺ cells in the CD45⁺CD34⁻CD105⁺CD90⁺ BM population that expresses CD271 and/or CD146 (mean ± SEM, n=53). ***P<0.0001. (B and C) Relative frequency of the same subsets defined in (A) specified for 19-55 year old donors (mean ± SEM, n=12) and donors older than 55 years (mean ± SEM, n=41). ***P<0.0001 (D-G) CD271 and CD146 expression in the CD45⁺CD34⁻ BM population of representative BM donors with increasing age. Red dots represent the cells that co-express CD90 and CD105.

Online Supplementary Table S1. Patients' specifications.

Healthy donors	Age (years)	Diagnosis	Bone marrow infiltration	Systemic chemotherapy
	1	54 Cardiac patient	No	No
	2	58 Cardiac patient	No	No
	3	73 Cardiac patient	No	No
	4	68 Cardiac patient	No	No
	5	55 Cardiac patient	No	No
	6	78 Cardiac patient	No	No
	7	72 Cardiac patient	No	No
	8	74 Cardiac patient	No	No
	9	71 Cardiac patient	No	No
	10	59 Cardiac patient	No	No
	11	42 Cardiac patient	No	No
	12	82 Cardiac patient	No	No
	13	78 Cardiac patient	No	No
	14	65 Cardiac patient	No	No
	15	43 Cardiac patient	No	No
	16	60 Cardiac patient	No	No
	17	48 Cardiac patient	No	No
	18	53 Cardiac patient	No	No
	19	65 Cardiac patient	No	No
	20	52 Cardiac patient	No	No
	21	62 Cardiac patient	No	No
	22	75 Cardiac patient	No	No
	23	73 Cardiac patient	No	No
	24	65 Cardiac patient	No	No
	25	72 Cardiac patient	No	No
	26	61 Cardiac patient	No	No
	27	74 Cardiac patient	No	No
	28	48 Cardiac patient	No	No
	29	80 Cardiac patient	No	No
	30	67 Cardiac patient	No	No
	31	75 Cardiac patient	No	No
	32	69 Cardiac patient	No	No
	33	58 Cardiac patient	No	No
	34	64 Cardiac patient	No	No
	35	75 Cardiac patient	No	No
	36	83 Cardiac patient	No	No
	37	72 Cardiac patient	No	No
	38	82 Cardiac patient	No	No
	39	64 Cardiac patient	No	No
	40	86 Cardiac patient	No	No
	41	77 Cardiac patient	No	No
	42	63 Cardiac patient	No	No
	43	63 Cardiac patient	No	No
	44	43 Healthy donor	No	No
	45	45 Healthy donor	No	No
	46	50 Healthy donor	No	No
	47	19 Suspected> healthy	No	No
	48	69 Suspected> healthy	No	No
	49	75 Suspected> healthy	No	No
	50	82 Suspected> healthy	No	No
	51	65 Suspected> healthy	No	No
	52	76 Suspected> healthy	No	No
	53	71 Suspected> healthy	No	No

Patients, not treated	Age (years)	Diagnosis	Bone marrow infiltration	Systemic chemotherapy
	1	1 Neuroblastoma, at diagnosis	PCR positive, not quantifiable	No
	2	0 Neuroblastoma, at diagnosis	Infiltration 0,1%	No
	3	0 Neuroblastoma, at diagnosis	Infiltration 0,1%	No
	4	1 Neuroblastoma, at diagnosis	Infiltration 0,1%	No
	5	2 Neuroblastoma, at diagnosis	Negative	No
	6	1 Neuroblastoma, at diagnosis	PCR positive, not quantifiable	No
	7	4 Neuroblastoma, at diagnosis	Infiltration 0,1-1,0%	No

Patients, during treatment	Age (years)	Diagnosis	Bone marrow infiltration	Systemic chemotherapy
	1	6 Neuroblastoma	PCR positive, not quantifiable	Yes
	2	4 Neuroblastoma	In complete remission	Yes
	3	1 Neuroblastoma	PCR positive, not quantifiable	Yes
	4	4 Neuroblastoma	Negative	Yes
	5	3 Neuroblastoma	PCR positive, not quantifiable	Yes
	6	1 Neuroblastoma	PCR positive, not quantifiable	Yes
	7	11 Neuroblastoma	In complete remission	Yes
	8	3 Neuroblastoma	Negative	Yes
	9	3 Rhabdomyosarcoma	In complete remission	Yes
	10	4 Rhabdomyosarcoma	In complete remission	Yes
	11	5 B-ALL	PCR positive, not quantifiable	Yes
	12	16 ALL	PCR positive, not quantifiable	Yes
	13	13 T-ALL	PCR positive, not quantifiable	Yes
	14	4 B-ALL	PCR positive, not quantifiable	Yes
	15	5 NHL	In complete remission	Yes
	16	15 Burkitt lymphoma	In complete remission	Yes
	17	7 ALL	In complete remission	Yes
	18	1 AnLL (AML)	In complete remission	Yes
	19	12 AnLL (AML)	In complete remission	Yes
	20	12 Hodgkin lymphoma	In complete remission	Yes

Fetal bone marrow	Gestation (weeks)	Diagnosis	Bone marrow infiltration	Systemic chemotherapy
	1	15 N/A	No	No
	2	16 N/A	No	No
	3	16+ N/A	No	No
	4	20 N/A	No	No
	5	20 N/A	No	No

6	18 N/A	No	No
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Remarks

The percentages CD271+CD146-, CD271-CD146+ and CD271+CD146+ cells refer to the cells that co-express CD90 and CD105

Samples from cardiac patients were taken during coronary artery bypass grafting surgery

All other patient samples were taken as diagnostic bone marrow aspirates or for bone marrow transplantation

PCR positive not quantifiable: signal below quantitative range of PCR

We have tested the effect of the following conditions

Children (mean±SEM)	Neuroblastoma diagnosis (n=7)	Neuroblastoma treated (n=8)	p-values (Mann-whitney-U)
CD271+CD146-	10,76 ± 3,26	25,31 ± 8,24	0,271
CD271+CD146+	84,30 ± 5,49	65,82 ± 9,03	0,148
CD271-CD146+	4,94 ± 2,57	8,89 ± 4,90	0,706

Children (mean±SEM)	Solid tumor (n=10)	Hematologic disease (n=10)	p-values (Mann-whitney-U)
CD271+CD146-	28,02 ± 6,76	33,71 ± 6,27	0,496
CD271+CD146+	63,09 ± 7,41	60,80 ± 6,10	0,821
CD271-CD146+	8,91 ± 4,07	5,49 ± 1,63	0,759

Children (mean±SEM)	BM infiltration (n=14)	No BM infiltration (n=13)	p-values (Mann-whitney-U)
CD271+CD146-	19,58 ± 3,85	32,19 ± 6,50	0,185
CD271+CD146+	72,95 ± 4,81	62,12 ± 6,78	0,302
CD271-CD146+	7,48 ± 2,70	5,68 ± 2,18	0,830

Children (mean % from MNC ± SEM)	BM infiltration (n=14)	No BM infiltration (n=13)	p-values (Mann-whitney-U)
CD271+CD146-	0,0033 ± 0,0012	0,0028 ± 0,0007	0,830
CD271+CD146+	0,0138 ± 0,0037	0,0062 ± 0,0009	0,243
CD271-CD146+	0,0007 ± 0,0002	0,0005 ± 0,0002	0,867

Abbreviations

ALL: Acute Lymphoblastic Leukemia

NHL: Non-Hodgkin Lymphoma

AnLL/AML: Acute Myeloid Leukemia

N/A: not applicable