Supplementary Information:

Supplementary Table 1. Estimation of cytokine transcript levels in HeLa and HS-5 cells after 5-AC treatment using Human common cytokines PCR array. (**A**) HeLa cells were treated with 2 µM 5-AC for 7 days and then the levels of 84 common cytokines were estimated with qRT-PCR. As differentially expressed genes were considered genes with > 2 log fold change in the gene expression compared to untreated control. The samples were measured in duplicates. (**B**) HS-5 cells were treated with 0.5 µM 5-AC for 7 days and then the levels of 84 common cytokines were estimated using qRT-PCR. As differentially expressed genes were considered genes with > 2 log fold change in the gene expression compared to untreated control. The samples were measured in duplicates.

Supplementary Table 1.
A) Human common cytokines PCR array for HeLa after 5-AC treatment.

	fold induction	std.dev.	p-value
IL6	**123,95**	0,90	0,100
IL8	**48,56**	0,89	0,204
IL24	**36,91**	3,51	0,175
IL11	**26,78**	0,53	0,343
OSM	**26,50**	0,00	0,403
IL20	**21,98**	0,97	0,341
INHBA	**8,94**	0,11	0,587
TGFA	**7,10**	0,54	0,604
SPP1	**5,09**	0,00	0,653
CSF2	**4,91**	0,00	0,660
GDF5	**4,64**	0,51	0,696
FAM3B	**3,82**	0,00	0,709
TNF	**3,68**	3,42	0,539
CSF1	**3,41**	0,19	0,698
IL17B	**3,37**	0,00	0,734
IL1B	**3,30**	1,62	0,656
TNFSF14	**2,83**	1,28	0,798
IL23A	**2,60**	0,00	0,788
BMP4	**2,60**	0,01	0,810
IL1A	**2,53**	0,11	0,792
TNFSF4	**2,32**	0,26	0,807
IL12A	**2,31**	0,89	0,746
LTB	**2,22**	0,01	0,822
PDGFA	**2,19**	1,17	0,750
CSF3	**2,17**	0,00	0,827
IL1RN	**2,07**	0,00	0,837
THPO	**2,02**	0,00	0,842
IL3	**-2,24**	0,000	0,820
IFNA4	**-2,34**	0,00	0,806
BMP5	**-4,94**	0,46	0,650

B) Human common cytokines PCR array for HS-5 after 5-AC treatment.

|	fold induction	std.dev.	p-value
OSM	32,27	0,75	0,005
IL20	19,27	1,03	0,051
IL24	6,95	0,43	0,028
GDF5	6,04	1,12	0,158
IL18	5,92	1,28	0,145
IL23A	5,88	0,07	0,007
BMP7	5,83	0,95	0,039
PDGFA	5,52	0,57	0,070
IL1RN	5,39	0,54	0,163
IL5	5,23	0,08	0,015
TNF	4,5	0,07	0,026
INHBA	4,42	0,72	0,025
CSF2	4,37	0,14	0,017
TGFB2	4,3	0,03	0,018
IL11	3,97	0,02	0,059
IL7	3,5	0,68	0,028
IL17B	3,44	1,05	0,138
TGFA	3,38	0,16	0,014
IL10	3,33	1,56	0,307
TNFSF13	3,29	0,28	0,036
IL21	3,24	0,03	0,042
GDF9	3,16	0,11	0,024
BMP5	3,01	0,18	0,001
BMP1	2,83	0,05	0,032
VEGFA	2,75	0,71	0,051
BMP3	2,71	1,94	0,399
IL15	2,68	0,45	0,053
FAM3B	2,61	0,76	0,065
LTB	2,59	0,06	0,117
IL12A	2,5	0,16	0,046
IFNG	2,46	0,30	0,077
IL16	2,46	0,002	0,070
IL6	2,42	0,20	0,005
TXLNA	2,19	0,41	0,021
IFNA2	2,18	0,70	0,072
IFNB1	2,08	0,11	0,092
TNFSF14	2,05	0,33	0,127
TNFSF13B	-2,10	0,27	0,1197
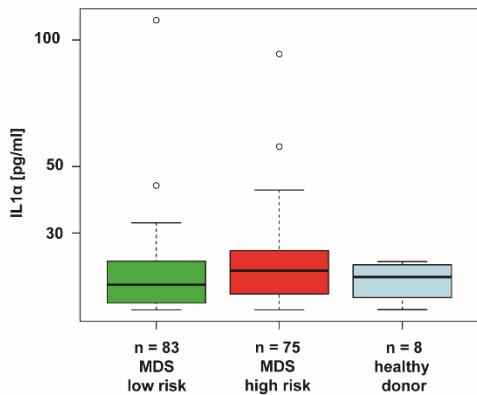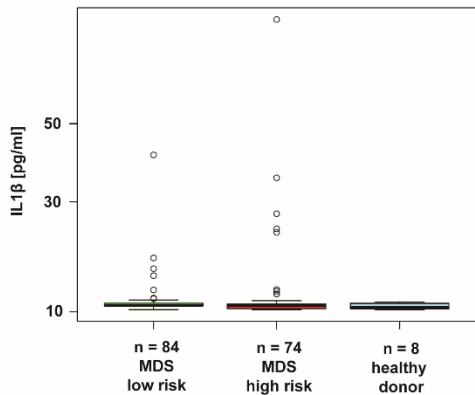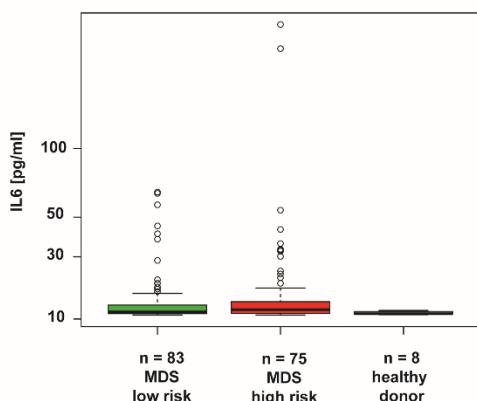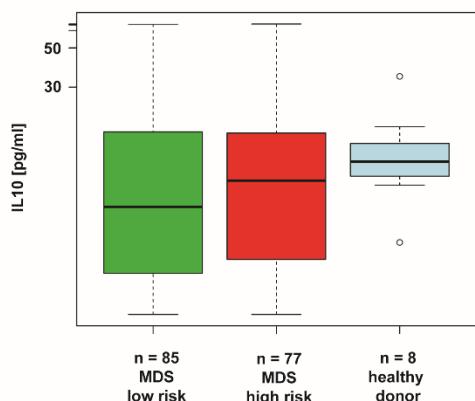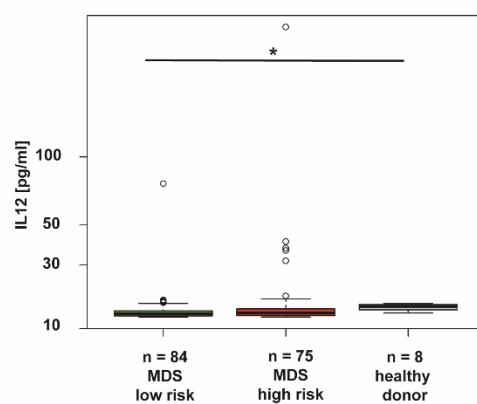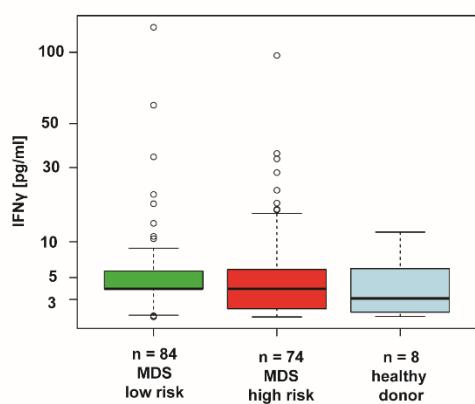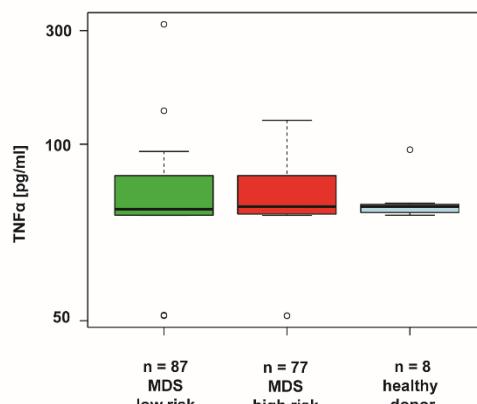
Supplementary Figure 1. Comparison of changes in cytokine levels among low-risk MDS, high-risk MDS and/or AML and healthy donors

Supplementary Figure 1. Comparison of changes in cytokine levels among low-risk MDS, high-risk MDS and/or AML and healthy donors. The data set was analyzed by robust linear mixed effects model at the 95% confidence interval. The box plot graphs demonstrate the upper and lower quartiles, and the median is represented by a short black line within the box for each group. The empty circles represent numerically distant measurements for individual patients (outliers; outside 1.5 times the interquartile range above the upper quartile and bellow the lower quartile). The p-value signifies the difference for the given cytokine measurements between all 3 groups. IL1a (p = 0.72); IL1b (p = 0.43); IL6 (p = 0.18); IL10 (p = 0.38); IL12p70 (p = 0.02); IFNg (p = 0.41); TNFa (p = 0.36).

A IL8 in BM and PB plasma

R = 0.6277

B IL10 in BM and PB plasma

R = 0.9192

C IL27 in BM and PB plasma

R = 0.6319

D IP10 in BM and PB plasma

R = 0.1187

**E** MCP1 in BM and PB plasma

R = 0.0055

F TNFα in BM and PB plasma
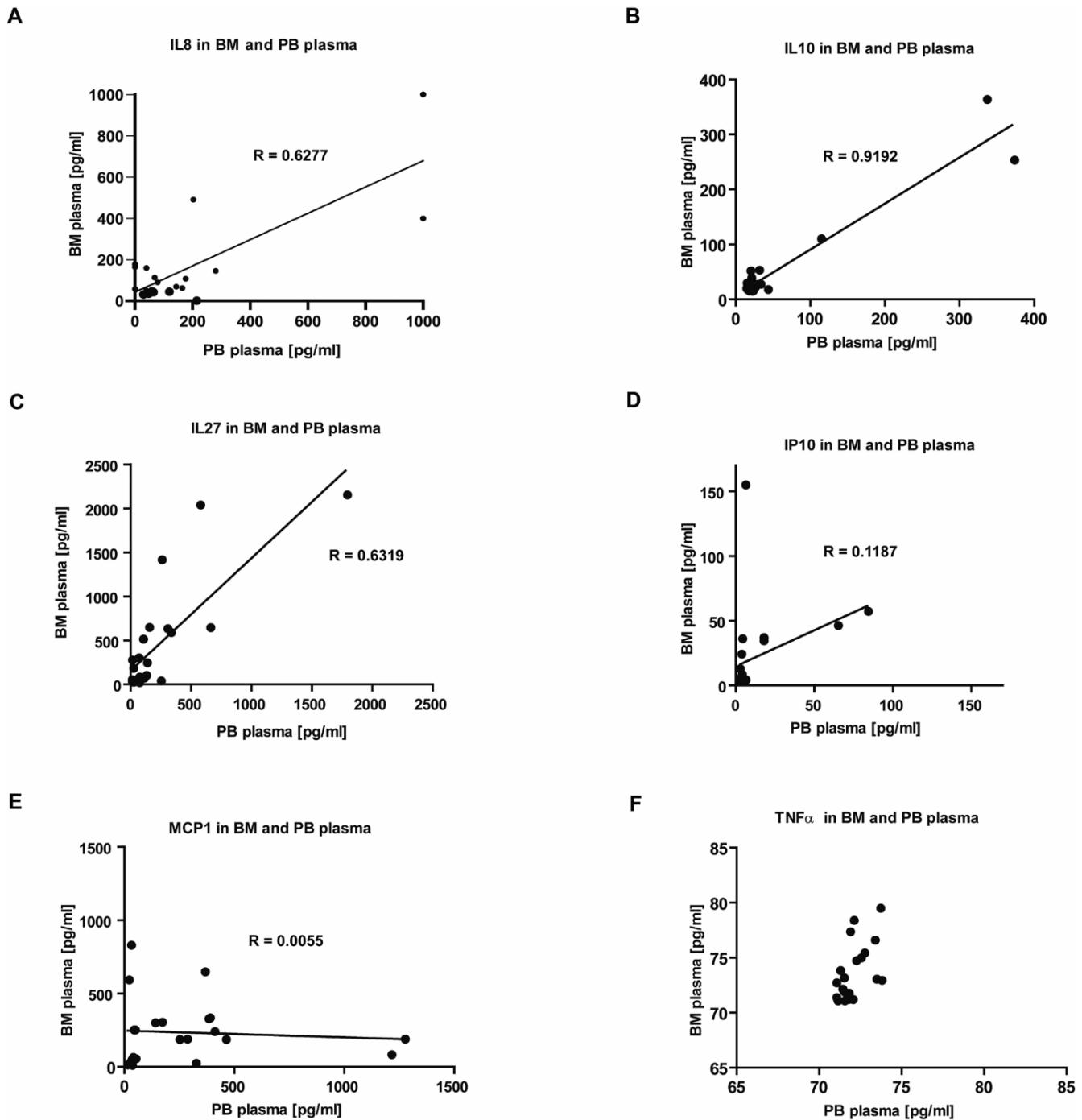
Supplementary Figure 2. Simultaneous estimation of cytokine levels in PB and BM plasma.
BM and PB plasma collected at the same time point for the given patient was analyzed for IL8
(A), IL10 (B), IL27 (C), IP10 (D), MCP1 (E), and TNFα (F). In order to minimize the inter-
sample variability, the corresponding samples were handled together and measured on the same
11-plex plate.