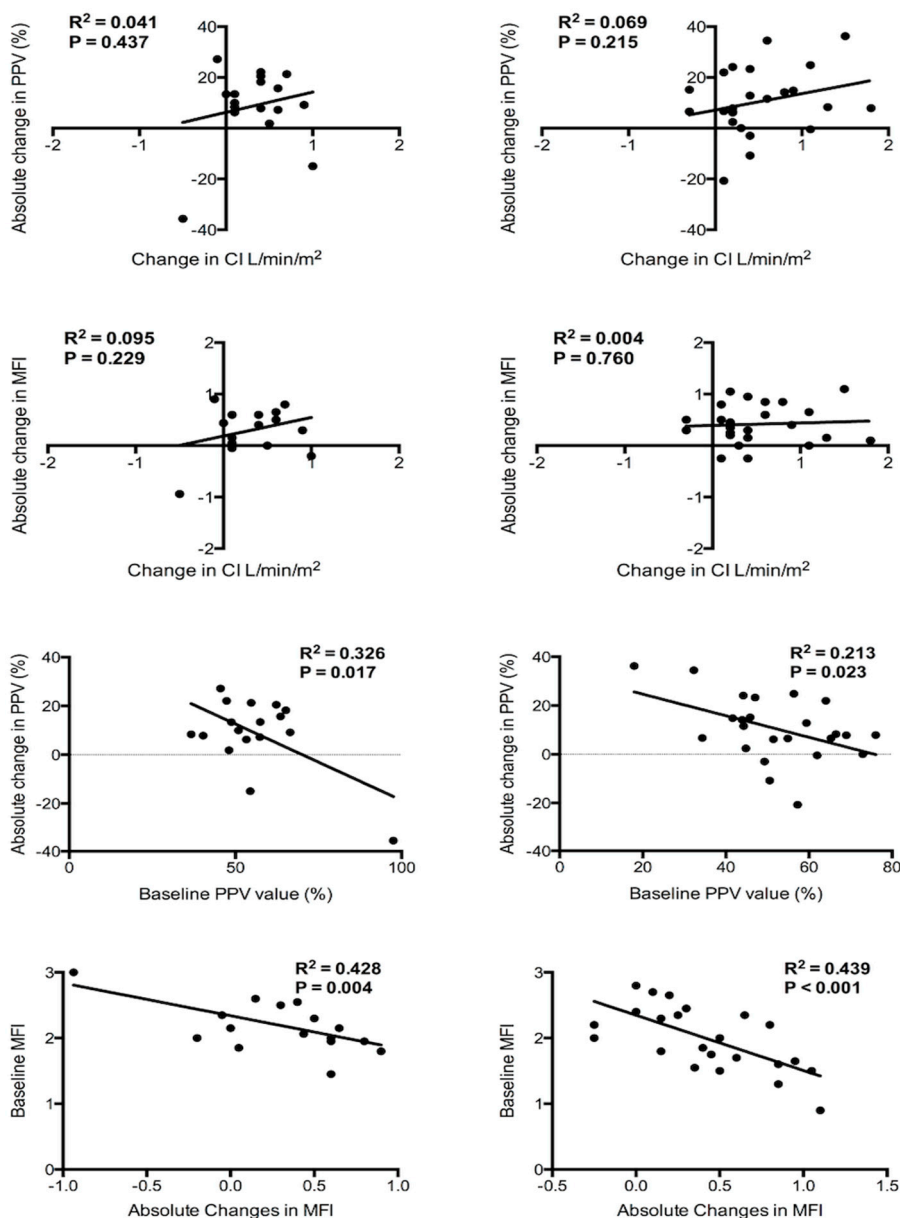


Additional files

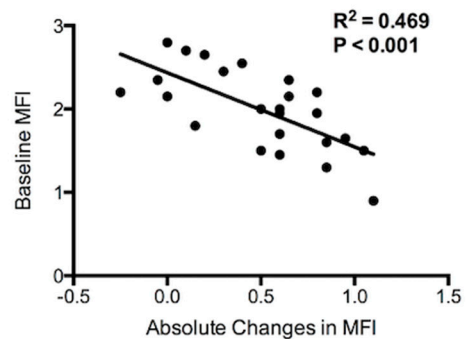
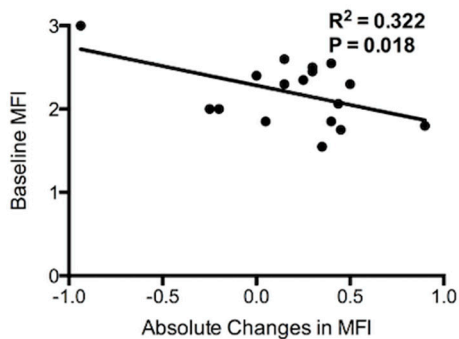
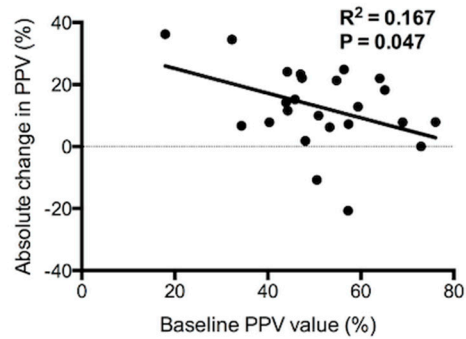
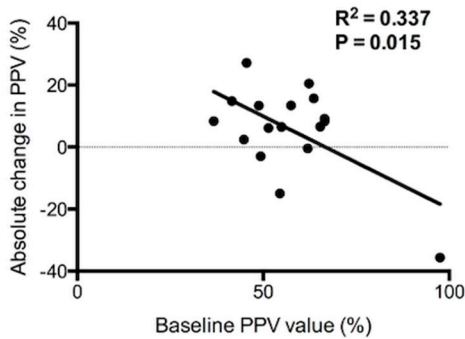
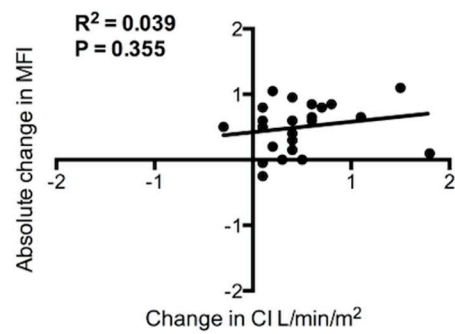
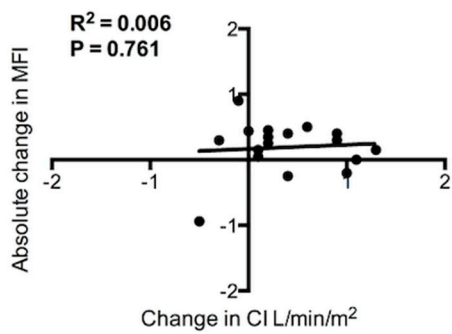
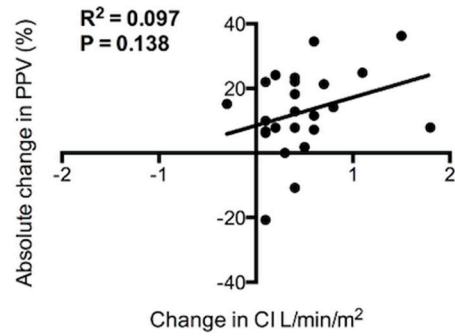
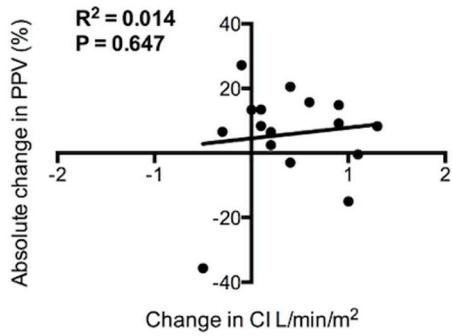
Additional file 1. Proportion of patients responding to fluid challenge according to changes in cardiac index (CI, i.e. > 10%) or to changes in the proportion of perfused small vessels (PPV, > 10%), in relationship to the use of norepinephrine or sedation. Total of fluid challenge = 41.

		Responders PPV	Non-responders PPV
Norepinephrine, (n=24)	Responders CI	6	8
	Non-responders CI	3	7
No norepinephrine, (n=17)	Responders CI	5	5
	Non-responders CI	3	4
Sedation, (n=24)	Responders CI	10	6
	Non-responders CI	3	5
No Sedation, (n=17)	Responders CI	3	5
	Non-responders CI	3	6

Additional file 2. Correlation analysis in the subgroups of patients treated (right) or not (left) with norepinephrine drug infusion. CI, cardiac index; PPV, proportion of perfused small vessels; MFI, mean flow index.



Additional file 3. Correlation analysis in the subgroups of patients treated (right) or not (left) with sedation therapy. CI, cardiac index; PPV, proportion of perfused small vessels; MFI, mean flow index.



Additional File 4. Univariate analysis between responders and non-responders to fluid challenge according to changes in the proportion of perfused small vessels greater (i.e. > 10%).

Variable	Non Responders N = 22	Responders N = 19	P value
<i>Hemodynamics</i>			
Heart rate, beat per minutes	93 [81-100]	85 [74-112]	0.862
Mean arterial pressure, mmHg	72 [69-81]	68 [63-74]	0.124
Central venous pressure, mmHg	8 [6-11]	7 [6-12]	0.668
Cardiac index, L/min/m ²	2.7 [2.3-3.1]	2.6 [2.1-3.1]	0.998
Lactate, mmol/L	1.5 [1.0-2.3]	1.8 [1.1-4.1]	0.114
Central oxygen venous saturation, %	70 [61-75]	71 [63-81]	0.099
Venous arterial carbon dioxide gap, mmHg	8 [6-9]	8 [6-11]	0.421
<i>Microcirculation</i>			
Total vessel density, mm/mm ²	15.1 [13.2-18.2]	14.6 [12.4-18.3]	0.091
Density of perfused small vessel, mm/mm ²	8.7 [6.4-10.3]	6.8 [5.7-10.2]	0.700
Proportion of perfused small vessels, (PPV) %	55 [49-66]	47 [44-59]	0.072
Microvascular flow index, (MFI)	2.2 [1.8-2.5]	1.9 [1.6-2.3]	0.116
Heterogeneity of MFI, (%)	0.44 [0.30-0.61]	0.52 [0.35-0.69]	0.192
Heterogeneity of PPV, (%)	0.56 [0.36-0.73]	0.52 [0.35-0.69]	0.178

PPV = proportion of perfused vessels; MFI = mean flow index; fluid challenge = 41.