

**S3 Table. PLS correlation coefficients for taxa and biological covariates with a statistically significant correlation.** Statistical significance is indicated by that the PLS correlation coeff (Corr) 95% CI does not include zero. Text highlighted in grey refers to taxa with a correlation coefficient >0.1 and (G) to the genus level.

Q<sup>2</sup>=cross validated predicitive value of the model.

EF versus SF group				BFR versus no BFR			
4 month (Q2=0.15)		12 month (Q2=0.05)		4 month (Q2=0.57)		12 month (Q2=0.30)	
EF Factor	Corr	EF Factor	Corr	BFR Factor	Corr	BFR Factor	Corr
Aggregatibacter sp. HOT513	0.140	Megasphaera (G)	0.138	<b>yes</b> Lactobacillus (culture)	0.116	<b>yes</b> Rothia aeria	0.063
Streptococcus sp. HOT423	0.132	Megasphaera micronuciformis	0.138	Bifidobacterium (G)	0.106	Streptococcus sp. HOT423	0.055
Porphyromonas (G)	0.126	Clostridiales [F-2][G-1] sp. HOT075	0.124	Bifidobacterium breve	0.086	Oribacterium (G)	0.044
Porphyromonas sp. HOT279	0.126	Clostridiales[F-2][G-1] (G)	0.124	Kingella oralis	0.079	Oribacterium sp. HOT108	0.044
Klebsiella (G)	0.097	Oribacterium (G)	0.107	Ralstonia (G)	0.076	Actinomyces sp. HOT172	0.030
Klebsiella pneumoniae	0.097	Oribacterium sp. HOT108	0.107	Ralstonia sp. HOT406	0.076		
Actinomyces oris	0.093	Prevotella pallens	0.096	Lactobacillus rhamnosus	0.074		
Rothia dentocariosa	0.078	Neisseria polysaccharea	0.095	Lactobacillus (G)	0.055		
Leptotrichia wadei	0.077	Prevotella salivae	0.094	Sex	0.040		
Abiotrophia (G)	0.068	Lachnospiraceae [G-3] (G)	0.087	Lactobacillus gasseri	0.037		
Abiotrophia defectiva	0.068	Lachnospiraceae [G-3] sp. HOT100	0.087				
Sex	0.021	Dolosigranulum (G)	0.085	<b>no</b>		<b>no</b>	
		Dolosigranulum pigrum	0.085	Solobacterium (G)	-0.214	Klebsiella (G)	-0.235
		Alloprevotella rava	0.085	Solobacterium moorei	-0.214	Klebsiella pneumoniae	-0.235
		Lactobacillus (G)	0.072	Leptotrichia (G)	-0.187	Staphylococcus (G)	-0.172
		Lactobacillus gasseri	0.059	Campylobacter concisus	-0.178	Staphylococcus epidermidis	-0.170
				Campylobacter (G)	-0.176	Prevotella sp. HOT396	-0.139
<b>SF</b>		<b>SF</b>		Prevotella sp. HOT314	-0.156	Neisseria elongata	-0.122
Lachnoanaerobaculum saburreum	-0.171	Neisseria oralis	-0.153	Lachnoanaerobaculum orale	-0.152	Prevotella pallens	-0.119
Dialister (G)	-0.127	Prevotella sp. HOT314	-0.144	Leptotrichia sp. HOT215	-0.151	Streptococcus sp. HOT064	-0.119
Dialister invisus	-0.127	Aggregatibacter aphrophilus	-0.140	Veillonella parvula	-0.150	Enterococcus (G)	-0.115
Finegoldia (G)	-0.127	Actinomyces sp. HOT177	-0.136	Lachnoanaerobaculum umeaense	-0.147	Enterococcus faecalis	-0.115
Finegoldia magna	-0.127	Abiotrophia (G)	-0.133	Prevotella salivae	-0.146	Gemella morbillorum	-0.108
Neisseria lactamica	-0.127	Abiotrophia defectiva	-0.133	Moryella sp. HOT419	-0.143	Prevotella sp. HOT309	-0.108
Leptotrichia sp. HOT392	-0.126	Bergeyella sp. HOT907	-0.133	Lachnoanaerobaculum (G)	-0.142	Streptococcus intermedius	-0.107

Eubacterium [11][G-7] (G)	-0.125	Aggregatibacter paraphrophilus	-0.131	Mogibacterium (G)	-0.141	Alloprevotella tannerae	-0.105
Eubacterium [XI][G-7] yurii	-0.125	Aggregatibacter sp. HOT458	-0.127	Mogibacterium neglectum	-0.141	Streptococcus anginosus	-0.103
Streptococcus agalactiae	-0.109	Lautropia (G)	-0.126	Lachnospiraceae [G-2] sp. HOT096	-0.140	Yersinia (G)	-0.101
Moraxella (G)	-0.108	Lautropia mirabilis	-0.126	Lachnospiraceae[G-2] (G)	-0.140	Yersinia pestis	-0.101
Moraxella catarrhalis	-0.108	Porphyromonas sp. HOT278	-0.124	Stomatobaculum (G)	-0.127	Alloprevotella sp. HOT912	-0.101
Atopobium (G)	-0.106	Cardiobacterium (G)	-0.123	Actinomyces sp. HOT172	-0.125	Neisseria oralis	-0.100
Atopobium parvulum	-0.106	Aggregatibacter (G)	-0.120	Leptotrichia sp. HOT417	-0.123	Leptotrichia sp. HOT392	-0.099
Solobacterium (G)	-0.102	Tannerella sp. HOT286	-0.120	Megasphaera (G)	-0.116	SR1 [G-1] sp. HOT875	-0.098
Solobacterium moorei	-0.102	Moryella sp. HOT419	-0.119	Megasphaera micronuciformis	-0.116	SR1[G-1] (G)	-0.098
Prevotella salivae	-0.099	Cardiobacterium hominis	-0.114	Oribacterium (G)	-0.114	Mycoplasma (G)	-0.097
Prevotella histicola	-0.087	Selenomonas sp. HOT892	-0.110	Oribacterium sp. HOT108	-0.114	Mycoplasma salivarium	-0.097
Selenomonas (G)	-0.082	Actinomyces johnsonii	-0.104	Leptotrichia sp. HOT221	-0.113	Prevotella sp. HOT310	-0.096
Campylobacter concisus	-0.075	TM7 [G-1] sp. HOT353	-0.102	Actinomyces meyeri	-0.113	Selenomonas (G)	-0.096
Lachnoanaerobaculum (G)	-0.073	Actinomyces massiliensis	-0.092	Actinomyces graevenitzii	-0.106	Lactobacillus (G)	-0.095
Veillonella parvula	-0.073	Fusobacterium nucleatum ss. nucleatum	-0.090	Streptococcus sp. HOT423	-0.099	Prevotella oulorum	-0.093
Megasphaera (G)	-0.066	Leptotrichia wadei	-0.085	Veillonella rogosae	-0.099	Fusobacterium nucleatum ss. nucleatum	-0.092
Megasphaera micronuciformis	-0.066	Leptotrichia sp. HOT212	-0.084	Streptococcus gordonii	-0.096	Lactococcus lactis	-0.092
		Actinomyces naeslundii	-0.083	Prevotella sp. HOT313	-0.090	Lactobacillus gasseri	-0.091
		Moraxella (G)	-0.063	Lachnospiraceae [G-2] sp. HOT088	-0.088	Caesarean	-0.089
		Clostridiales [F-2][G-2] sp. HOT085	-0.056	Leptotrichia sp. HOT392	-0.085	Bergeyella (G)	-0.088
		Clostridiales[F-2][G-2] (G)	-0.056	Peptostreptococcus (G)	-0.085	Bergeyella sp. HOT322	-0.088
		Eikenella (G)	-0.053	Peptostreptococcus stomatis	-0.085	Campylobacter	-0.088
		Eikenella corrodens	-0.053	Actinomyces sp. HOT181	-0.085	Lachnospiraceae [G-3] (G)	-0.088
		Prevotella histicola	-0.042	Prevotella histicola	-0.083	Lachnospiraceae [G-3] sp. HOT100	-0.088
				Alloprevotella sp. HOT914	-0.083	Kingella sp. HOT459	-0.088
				Atopobium (G)	-0.083	Dialister (G)	-0.087
				Atopobium parvulum	-0.083	Dialister invisus	-0.087
				Prevotella sp. HOT299	-0.082	Neisseria sp. HOT016	-0.087
				Leptotrichia shahii	-0.079	Treponema (G)	-0.087
				Veillonella sp. HOT917	-0.075	Treponema vincentii	-0.087

Streptococcus sp. HOT057	-0.074	Parvimonas (G)	-0.085
TM7[G-1] (G)	-0.070	Aggregatibacter	-0.083
Alloprevotella sp. HOT308	-0.070	Prevotella salivae	-0.083
Leptotrichia sp. HOT462	-0.069	Streptococcus mutans	-0.082
Fusobacterium sp. HOT370	-0.067	Prevotella shahii	-0.082
Leptotrichia hongkongensis	-0.067	Alloprevotella rava	-0.081
Prevotella veroralis	-0.065	Fusobacterium naviforme	-0.081
Leptotrichia sp. HOT225	-0.060	Aggregatibacter paraphrophilus	-0.078
Leptotrichia sp. HOT498	-0.060	Mogibacterium (G)	-0.075
Peptococcus (G)	-0.060	Mogibacterium neglectum	-0.075
Peptococcus sp. HOT168	-0.060	Lautropia (G)	-0.075
Streptococcus australis	-0.059	Lautropia mirabilis	-0.075
Caesarean	-0.058	Bergeyella sp. HOT900	-0.074
Catonella (G)	-0.057	Selenomonas sputigena	-0.073
Catonella morbi	-0.057	TM7 [G-1] sp. HOT348	-0.073
TM7 [G-1] sp. HOT352	-0.057	Aggregatibacter sp. HOT513	-0.072
Clostridiales [F-2][G-1] sp. HOT075	-0.056	Neisseria lactamica	-0.072
Clostridiales[F-2][G-1] (G)	-0.056	Campylobacter rectus	-0.072
Prevotella oulorum	-0.054	Actinomyces odontolyticus	-0.070
Leptotrichia sp. HOT463	-0.054	Kingella denitrificans	-0.070
Neisseria mucosa	-0.053	Parvimonas micra	-0.069
Alloprevotella sp. HOT912	-0.052	Haemophilus influenzae	-0.065
Prevotella sp. HOT309	-0.050	Staphylococcus caprae	-0.063
Corynebacterium diphtheriae	-0.050	Prevotella oris	-0.062
Actinomyces sp. HOT177	-0.048	Fusobacterium nucleatum ss vincentii	-0.061
Prevotella sp. HOT396	-0.048	Aggregatibacter aphrophilus	-0.060
Selenomonas sp. HOT149	-0.048	Prevotella veroralis	-0.058
TM7 [G-3] sp. HOT351	-0.048	Tannerella sp. HOT808	-0.058
TM7[G-3] (G)	-0.048	Veillonella denticariosi	-0.056
Simonsiella (G)	-0.044	Capnocytophaga leadbetteri	-0.055
Simonsiella muelleri	-0.044	Leptotrichia sp. HOT498	-0.051

Fusobacterium periodonticum	-0.041	Selenomonas sp. HOT478	-0.051
Campylobacter gracilis	-0.039	Selenomonas sp. HOT892	-0.051
Dialister (G)	-0.039	Staphylococcus warneri	-0.051
Dialister invisus	-0.039	TM7 [G-1] sp. HOT346	-0.051
Neisseria lactamica	-0.039	Neisseria sp. HOT015	-0.050
Prevotella sp. HOT305	-0.039	Prevotella denticola	-0.050
Selenomonas sp. HOT136	-0.039	Corynebacterium diphtheriae	-0.046
Lachnoanaerobaculum saburreum	-0.039	Prevotella scopos	-0.046
Klebsiella (G)	-0.034	Moraxella osloensis	-0.044
Klebsiella pneumoniae	-0.034	Scardovia (G)	-0.044
Leptotrichia sp. HOT879	-0.034	Scardovia wiggsiae	-0.044
Prevotella sp. HOT310	-0.034		
Selenomonas sp. HOT478	-0.034		
Streptococcus agalactiae	-0.034		
SR1 [G-1] sp. HOT875	-0.033		
SR1[G-1] (G)	-0.033		
Fusobacterium nucleatum ss vincentii	-0.032		

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