

**SUPPLEMENTARY DATA #2****IMPACT OF STATINS ON FIB-4 PREDICTIONS: LOGISTIC****REGRESION MODELING**

Logistic regression models assessing the impact of statins on the association between FIB-4 and the probability of high VCTE at four clinically relevant thresholds. Interactions between statin and FIB4 was non-significant and was omitted from the final models. **The graphical representation of these models is provided in figure 1.**

The Wald chi-square statistic represents how much of the outcome (VCTE above the threshold) each variable in the model explains

**VCTE >8 kPa**

	$\beta$	S.E.	Wald Z	Pr(> Z )
Intercept	-2.8520	0.2005	-14.23	<0.0001
FIB4	0.6989	0.1488	4.70	<0.0001
statinstatus=Statin	0.6923	0.2584	2.68	0.0074

Wald Statistics for *vcte8*

	$\chi^2$	d.f.	P
FIB4	22.05	1	<0.0001
statinstatus	7.18	1	0.0074
TOTAL	36.94	2	<0.0001

**VCTE >10 kPa**

	$\beta$	S.E.	Wald Z	Pr(> Z )
Intercept	-3.3175	0.2288	-14.50	<0.0001
FIB4	0.7417	0.1570	4.72	<0.0001
statinstatus=Statin	0.4812	0.3096	1.55	0.1201

Wald Statistics for *vcte10*

	$\chi^2$	d.f.	P
FIB4	22.32	1	<0.0001
statinstatus	2.42	1	0.1201
TOTAL	29.91	2	<0.0001

## VCTE &gt;12 kPa

	$\beta$	S.E.	Wald Z	Pr(> Z )
Intercept	-4.1991	0.2983	-14.08	<0.0001
FIB4	0.8978	0.1750	5.13	<0.0001
statinstatus=Statin	0.8080	0.3659	2.21	0.0272

Wald Statistics for *vcte12*

	$\chi^2$	d.f.	P
FIB4	26.32	1	<0.0001
statinstatus	4.88	1	0.0272
TOTAL	37.24	2	<0.0001

## VCTE &gt;16 kPa

	$\beta$	S.E.	Wald Z	Pr(> Z )
Intercept	-4.8019	0.3888	-12.35	<0.0001
FIB4	0.7230	0.1970	3.67	0.0002
statinstatus=Statin	0.9446	0.4937	1.91	0.0557

Wald Statistics for *vcte16*

	$\chi^2$	d.f.	P
FIB4	13.47	1	0.0002
statinstatus	3.66	1	0.0557
TOTAL	21.14	2	<0.0001

**Adjusted logistic regression models** assessing the impact of statins on the association between FIB-4 and the probability of high VCTE at four clinically relevant thresholds (covariates for adjustment: Age, BMI and Diabetic status. According to our previous results (Davyducke et al, Hep Comm 2019) age was allowed to interact with FIB4, to reflect the changing influence of age weight on FIB4 at different ages). **Graphical representation of these models is provided in FIGURE 2 in the main manuscript** (NVSPDVSDM: diabetes status)

### VCTE > 8 kPa

	$\beta$	S.E.	Wald Z	Pr(> Z )
Intercept	-6.2161	1.0595	-5.87	<0.0001
FIB4	1.2672	0.7135	1.78	0.0757
Ageyrs	-0.0080	0.0178	-0.45	0.6533
statinstatus=Statin	0.5658	0.2931	1.93	0.0536
NVSPDVSDM=Prediabetes	0.4034	0.3043	1.33	0.1850
NVSPDVSDM=Diabetes	1.1335	0.3191	3.55	0.0004
BMIkgm2	0.0943	0.0205	4.60	<0.0001
FIB4 × Ageyrs	-0.0097	0.0132	-0.73	0.4637

#### Wald Statistics for vcte8

	$\chi^2$	d.f.	P
FIB4 (Factor+Higher Order Factors)	19.94	2	<0.0001
All Interactions	0.54	1	0.4637
Ageyrs (Factor+Higher Order Factors)	2.10	2	0.3496
All Interactions	0.54	1	0.4637
statinstatus	3.73	1	0.0536
NVSPDVSDM	14.00	2	0.0009
BMIkgm2	21.18	1	<0.0001
FIB4 × Ageyrs (Factor+Higher Order Factors)	0.54	1	0.4637
TOTAL	72.22	7	<0.0001

### VCTE > 10 kPa

	$\beta$	S.E.	Wald Z	Pr(> Z )
Intercept	-8.5345	1.3004	-6.56	<0.0001
FIB4	1.2269	0.6950	1.77	0.0775
Ageyrs	0.0221	0.0205	1.08	0.2819
statinstatus=Statin	0.1082	0.3463	0.31	0.7547
NVSPDVSDM=Prediabetes	0.0328	0.3788	0.09	0.9310
NVSPDVSDM=Diabetes	1.1005	0.3707	2.97	0.0030
BMIkgm2	0.1185	0.0240	4.95	<0.0001
FIB4 × Ageyrs	-0.0104	0.0128	-0.82	0.4131

Wald Statistics for  $vcte \leq 10$ 

	$\chi^2$	d.f.	P
FIB4 (Factor+Higher Order Factors)	16.57	2	0.0003
All Interactions	0.67	1	0.4131
Ageyrs (Factor+Higher Order Factors)	1.18	2	0.5535
All Interactions	0.67	1	0.4131
statinstatus	0.10	1	0.7547
NVSPDVSDM	14.19	2	0.0008
BMIkgm2	24.47	1	<0.0001
FIB4 × Ageyrs (Factor+Higher Order Factors)	0.67	1	0.4131
TOTAL	65.95	7	<0.0001

**VCTE > 12 kPa**

	$\beta$	S.E.	Wald Z	Pr(> Z )
Intercept	-10.4684	1.7726	-5.91	<0.0001
FIB4	2.1928	0.8553	2.56	0.0104
Ageyrs	0.0467	0.0274	1.70	0.0891
statinstatus=Statin	0.4389	0.4066	1.08	0.2803
NVSPDVSDM=Prediabetes	0.3588	0.5284	0.68	0.4971
NVSPDVSDM=Diabetes	1.1972	0.5202	2.30	0.0214
BMIkgm2	0.1080	0.0302	3.58	0.0003
FIB4 × Ageyrs	-0.0258	0.0150	-1.71	0.0865

Wald Statistics for `vcte12`

	$\chi^2$	d.f.	P
FIB4 (Factor+Higher Order Factors)	21.22	2	<0.0001
<i>All Interactions</i>	2.94	1	0.0865
Ageyrs (Factor+Higher Order Factors)	3.52	2	0.1721
<i>All Interactions</i>	2.94	1	0.0865
statinstatus	1.17	1	0.2803
NVSPDVSDM	7.30	2	0.0260
BMIkgm2	12.81	1	0.0003
FIB4 × Ageyrs (Factor+Higher Order Factors)	2.94	1	0.0865
TOTAL	54.34	7	<0.0001

## VCTE &gt; 16 kPa

	$\beta$	S.E.	Wald Z	Pr(> Z )
Intercept	-15.9647	2.8844	-5.53	<0.0001
FIB4	2.4577	0.8577	2.87	0.0042
Ageyrs	0.0760	0.0390	1.95	0.0512
statinstatus=Statin	0.5723	0.5658	1.01	0.3118
NVSPDVSDM=Prediabetes	0.9123	1.0125	0.90	0.3676
NVSPDVSDM=Diabetes	1.9133	0.9717	1.97	0.0490
BMIkgm2	0.1802	0.0419	4.30	<0.0001
FIB4 × Ageyrs	-0.0311	0.0142	-2.19	0.0286

Wald Statistics for `vcte16`

	$\chi^2$	d.f.	P
FIB4 (Factor+Higher Order Factors)	21.00	2	<0.0001
<i>All Interactions</i>	4.79	1	0.0286
Ageyrs (Factor+Higher Order Factors)	5.29	2	0.0711
<i>All Interactions</i>	4.79	1	0.0286
statinstatus	1.02	1	0.3118
NVSPDVSDM	5.89	2	0.0525
BMIkgm2	18.49	1	<0.0001
FIB4 × Ageyrs (Factor+Higher Order Factors)	4.79	1	0.0286
TOTAL	41.34	7	<0.0001

## IMPACT OF STATINS ON HEPAMET PREDICTIONS

Logistic regression models assessing the impact of statins on the association between Hepamet and probability of high VCTE at four clinically relevant thresholds. **The graphical representation of these models is provided in figure 3.**

### VCTE >8 kPa

	$\beta$	S.E.	Wald Z	Pr(> Z )
Intercept	-2.5970	0.1544	-16.82	<0.0001
HEPAMET	5.0088	0.7803	6.42	<0.0001
statinstatus=Statin	0.6848	0.2658	2.58	0.0100

#### Wald Statistics for $vcte8$

	$\chi^2$	d.f.	P
HEPAMET	41.21	1	<0.0001
statinstatus	6.64	1	0.0100
TOTAL	54.00	2	<0.0001

### VCTE >10 kPa

	$\beta$	S.E.	Wald Z	Pr(> Z )
Intercept	-3.0509	0.1836	-16.62	<0.0001
HEPAMET	5.0900	0.8065	6.31	<0.0001
statinstatus=Statin	0.5175	0.3155	1.64	0.1009

#### Wald Statistics for $vcte10$

	$\chi^2$	d.f.	P
HEPAMET	39.83	1	<0.0001
statinstatus	2.69	1	0.1009
TOTAL	47.33	2	<0.0001

### VCTE >12 kPa

	$\beta$	S.E.	Wald Z	Pr(> Z )
Intercept	-3.8564	0.2534	-15.22	<0.0001
HEPAMET	5.8087	0.8902	6.53	<0.0001
statinstatus=Statin	0.8543	0.3726	2.29	0.0218

Wald Statistics for *vcte12*

	$\chi^2$	d.f.	P
HEPAMET	42.58	1	<0.0001
statinstatus	5.26	1	0.0218
TOTAL	52.11	2	<0.0001

**VCTE >16 kPa**

	$\beta$	S.E.	Wald Z	Pr(> Z )
Intercept	-4.7354	0.3706	-12.78	<0.0001
HEPAMET	5.8661	1.0359	5.66	<0.0001
statinstatus=Statin	0.8726	0.5097	1.71	0.0869

Wald Statistics for *vcte16*

	$\chi^2$	d.f.	P
HEPAMET	32.07	1	<0.0001
statinstatus	2.93	1	0.0869
TOTAL	38.26	2	<0.0001

## IMPACT OF STATINS ON NFS PREDICTIONS

Logistic regression models assessing the impact of statins on the association between NFS and the probability of high VCTE at four clinically relevant thresholds. **The graphical representation of these models is provided in figure 4.**

### VCTE >8 kPa

	$\beta$	S.E.	Wald Z	Pr(> Z )
Intercept	-0.7782	0.2197	-3.54	0.0004
NFS	0.6298	0.0927	6.80	<0.0001
statinstatus=Statin	0.3846	0.2689	1.43	0.1526

#### Wald Statistics for vcte8

	$\chi^2$	d.f.	P
NFS	46.18	1	<0.0001
statinstatus	2.05	1	0.1526
TOTAL	61.03	2	<0.0001

### VCTE >10 kPa

	$\beta$	S.E.	Wald Z	Pr(> Z )
Intercept	-0.9270	0.2409	-3.85	0.0001
NFS	0.7970	0.1109	7.19	<0.0001
statinstatus=Statin	0.0542	0.3220	0.17	0.8663

#### Wald Statistics for vcte10

	$\chi^2$	d.f.	P
NFS	51.63	1	<0.0001
statinstatus	0.03	1	0.8663
TOTAL	58.88	2	<0.0001

### VCTE >12 kPa



	$\beta$	S.E.	Wald Z	Pr(> Z )
Intercept	-1.3779	0.2809	-4.91	<0.0001
NFS	1.0122	0.1448	6.99	<0.0001
statinstatus=Statin	0.3265	0.3804	0.86	0.3908

Wald Statistics for `vcte12`

	$\chi^2$	d.f.	P
NFS	48.89	1	<0.0001
statinstatus	0.74	1	0.3908
TOTAL	57.97	2	<0.0001

**VCTE >16 kPa**

	$\beta$	S.E.	Wald Z	Pr(> Z )
Intercept	-2.0595	0.3574	-5.76	<0.0001
NFS	1.3008	0.2129	6.11	<0.0001
statinstatus=Statin	0.3078	0.5221	0.59	0.5555

Wald Statistics for `vcte16`

	$\chi^2$	d.f.	P
NFS	37.34	1	<0.0001
statinstatus	0.35	1	0.5555
TOTAL	41.91	2	<0.0001