



Supplementary Figure 1. Thickness of each fundus layer measured by swept-source optical coherence tomography (SS-OCT).

The thickness of each fundus layer was measured by SS-OCT. Retinal thickness was defined as the vertical distance between the internal limiting membrane (ILM) and the retinal pigment epithelium (**A and C**); retinal nerve fibre layer thickness was defined as the vertical distance between the ILM and the interface between the retinal nerve fibre layer and the retinal ganglion cell layer (**E and G**). The GCL+ layer was defined as the combined thickness of the ganglion cell layer and the inner plexiform layer (**I and K**) and choroidal thickness was defined as the vertical distance between Bruch's membrane and the choroidal-scleral interface (**M and O**). The Early Treatment Diabetic Retinopathy Study (ETDRS) grid was overlaid to define the sectors in both the macular (**B, F, J and N**) and peripapillary (**D, H, L and P**) regions. In the macular region, all nine sectors of the grid were applied. By contrast, in the peripapillary region, only four sectors in the outer ring were used in the final analysis because the inner circle and the inner ring may be partially occupied by the optic disc or PPA, and the topographic maps in these sectors were not reliable.

	Height	Weight	R-UCVA	L-UCVA	R-AL	L-AL	R-IOP	L-IOP	R-SE	L-SE	R-BCVA	L-BCVA
Height	1.00	0.77	-0.13	-0.17	0.46	0.45	0.12	0.12	-0.18	-0.17	0.41	0.47
Weight	0.77	1.00	-0.08	-0.11	0.38	0.38	0.15	0.15	-0.16	-0.15	0.28	0.32
R-UCVA	-0.13	-0.08	1.00	0.59	-0.16	-0.02	0.01	0.07	0.25	0.02	-0.01	-0.09
L-UCVA	-0.17	-0.11	0.59	1.00	-0.11	-0.23	-0.04	0.01	0.11	0.25	-0.12	-0.09
R-AL	0.46	0.38	-0.16	-0.11	1.00	0.86	0.07	0.07	-0.55	-0.42	0.09	0.16
L-AL	0.45	0.38	-0.02	-0.23	0.86	1.00	0.10	0.09	-0.37	-0.61	0.16	0.14
R-IOP	0.12	0.15	0.01	-0.04	0.07	0.10	1.00	0.81	-0.03	-0.06	0.04	0.04
L-IOP	0.12	0.15	0.07	0.01	0.07	0.09	0.81	1.00	-0.01	-0.03	0.05	0.08
R-SE	-0.18	-0.16	0.25	0.11	-0.55	-0.37	-0.03	-0.01	1.00	0.67	0.19	0.14
L-SE	-0.17	-0.15	0.02	0.25	-0.42	-0.61	-0.06	-0.03	0.67	1.00	0.05	0.14
R-BCVA	0.41	0.28	-0.01	-0.12	0.09	0.16	0.04	0.05	0.19	0.05	1.00	0.74
L-BCVA	0.47	0.32	-0.09	-0.09	0.16	0.14	0.04	0.08	0.14	0.14	0.74	1.00

Supplementary Figure 2. Correlations between the right and left eyes.

Basic parameters of both eyes were compared, including uncorrected visual acuity (UCVA), axial length (AL), intraocular pressure (IOP), spherical equivalent (SE) and best corrected visual acuity (BCVA). R represents the right eye, and L represents the left eye. The parameters of the right and left eyes were moderately to highly correlated.

Supplementary Table 1. Association between nasal ChT, RT and myopia maculopathy categories.

	B	S.E.	Wald	P	OR	95% CI of OR	
						lower limit	upper limit
Constant *	-2.144	4.152	0.267	0.606			
Age, year	0.138	0.040	11.721	0.001	1.148	1.061	1.242
IOP, mmHg	-0.016	0.042	0.145	0.703	0.984	0.906	1.069
Axial length, mm	0.424	0.128	10.939	0.001	1.528	1.189	1.964
Nasal ChT, μm	-0.031	0.003	78.357	<0.001	0.970	0.963	0.977
Nasal RT, μm	-0.022	0.008	6.821	0.009	0.978	0.962	0.994
Gender=Male	-0.668	0.240	7.758	0.005	0.513	0.320	0.820
Gender=Female	0.000	.	.	.	.	.	.
Constant **	6.293	5.608	1.259	0.262			
Age, year	0.079	0.071	1.233	0.267	1.082	0.942	1.243
IOP, mmHg	-0.021	0.093	0.049	0.825	0.980	0.816	1.176
Axial length, mm	0.029	0.179	0.027	0.870	1.030	0.725	1.462
Nasal ChT, μm	-0.086	0.013	44.340	<0.001	0.917	0.894	0.941
Nasal RT, μm	-0.006	0.012	0.283	0.595	0.994	0.970	1.017
Gender=Male	-0.344	0.439	0.613	0.434	0.709	0.300	1.677
Gender=Female	0.000	.	.	.	.	.	.

IOP: intraocular pressure; Nasal ChT: mean choroidal thickness of the nasal region; nasal RT: mean retinal thickness of the nasal region.

* Logistic regression analysis to explore the independent factors of tessellated fundus (compared to children without myopic maculopathy).

** Logistic regression analysis to explore the independent factors of diffuse chorioretinal atrophy (compared to children with tessellated fundus).

Supplementary Table 2. Associated factors of the ChT and RT in the macular region.

Parameters	B	S.E.	95% CI		P	
			lower limit	upper limit		
Intercept	250.955	14.616	222.308	279.603	<0.0001	
age, year	-0.317	0.648	-1.586	0.953	0.625	
Gender	Male	-7.965	3.931	-15.670	-0.260	0.043
	Female	0.000	0.000	0.000	0.000	.
Central foveal ChT	IOP, mmHg	1.501	0.737	0.057	2.945	0.042
	SE, Diopter	6.135	0.962	4.249	8.020	<0.0001
Grade of MM	TF	-52.490	4.224	-60.768	-44.211	<0.0001
	DCA	-98.029	7.427	-112.585	-83.473	<0.0001
	Without MM	0.000	0.000	0.000	0.000	.
Intercept	225.891	13.825	198.795	252.987	<0.0001	
age, year	0.830	0.613	-0.371	2.031	0.175	
Gender	Male	-4.307	3.718	-11.594	2.981	0.247
	Female	0.000	0.000	0.000	0.000	.
ChT-In-I	IOP, mmHg	1.864	0.697	0.498	3.229	0.008
	SE, Diopter	5.618	0.910	3.835	7.401	<0.0001
Grade of MM	TF	-51.490	3.995	-59.320	-43.661	<0.0001
	DCA	-96.023	7.024	-109.791	-82.256	<0.0001
	Without MM	0.000	0.000	0.000	0.000	.
Intercept	206.129	13.586	179.501	232.756	<0.0001	
age, year	0.586	0.602	-0.594	1.766	0.330	
Gender	Male	-8.673	3.654	-15.835	-1.511	0.018
	Female	0.000	0.000	0.000	0.000	.
ChT-In-N	IOP, mmHg	1.600	0.685	0.258	2.942	0.020
	SE, Diopter	5.109	0.894	3.357	6.862	<0.0001
Grade of MM	TF	-50.494	3.926	-58.189	-42.800	<0.0001
	DCA	-98.278	6.903	-111.807	-84.748	<0.0001
	Without MM	0.000	0.000	0.000	0.000	.
Intercept	263.208	14.752	234.295	292.122	<0.0001	
age, year	0.014	0.654	-1.267	1.295	0.983	
Gender	Male	-6.903	3.968	-14.679	0.874	0.082
	Female	0.000	0.000	0.000	0.000	.
ChT-In-S	IOP, mmHg	0.994	0.744	-0.463	2.452	0.181
	SE, Diopter	5.519	0.971	3.616	7.422	<0.0001
Grade of MM	TF	-52.339	4.263	-60.694	-43.984	<0.0001
	DCA	-101.777	7.495	-116.468	-87.087	<0.0001
	Without MM	0.000	0.000	0.000	0.000	.

	Intercept		268.964	14.575	240.398	297.530	<0.0001
	age, year		-0.557	0.646	-1.822	0.709	0.389
	Gender	Male	-5.412	3.920	-13.095	2.271	0.167
		Female	0.000	0.000	0.000	0.000	.
ChT-	IOP, mmHg		1.201	0.735	-0.239	2.641	0.102
In-T	SE, Diopter		5.667	0.959	3.787	7.547	<0.0001
	Grade of MM	TF	-48.885	4.212	-57.139	-40.630	<0.0001
		DCA	-93.909	7.405	-108.423	-79.395	<0.0001
		Without MM	0.000	0.000	0.000	0.000	.
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	Intercept		185.559	13.103	159.877	211.240	<0.0001
	age, year		2.401	0.581	1.263	3.539	<0.0001
	Gender	Male	2.827	3.524	-4.080	9.734	0.423
		Female	0.000	0.000	0.000	0.000	.
ChT-	IOP, mmHg		1.794	0.661	0.500	3.089	0.007
Out-I	SE, Diopter		4.063	0.862	2.373	5.754	<0.0001
	Grade of MM	TF	-48.281	3.786	-55.702	-40.860	<0.0001
		DCA	-95.657	6.658	-108.705	-82.608	<0.0001
		Without MM	0.000	0.000	0.000	0.000	.
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	Intercept		143.750	11.735	120.750	166.751	<0.0001
	age, year		1.467	0.520	0.448	2.486	0.005
	Gender	Male	-3.858	3.156	-10.044	2.328	0.222
		Female	0.000	0.000	0.000	0.000	.
ChT-	IOP, mmHg		1.339	0.592	0.179	2.498	0.024
Out-N	SE, Diopter		3.695	0.772	2.181	5.209	<0.0001
	Grade of MM	TF	-42.469	3.391	-49.115	-35.823	<0.0001
		DCA	-83.955	5.963	-95.641	-72.268	<0.0001
		Without MM	0.000	0.000	0.000	0.000	.
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	Intercept		248.919	14.112	221.260	276.578	<0.0001
	age, year		1.823	0.625	0.598	3.049	0.004
	Gender	Male	-3.909	3.796	-11.348	3.530	0.303
		Female	0.000	0.000	0.000	0.000	.
ChT-	IOP, mmHg		0.546	0.711	-0.848	1.941	0.442
Out-S	SE, Diopter		4.987	0.929	3.166	6.807	<0.0001
	Grade of MM	TF	-50.515	4.078	-58.507	-42.522	<0.0001
		DCA	-102.853	7.170	-116.906	-88.800	<0.0001
		Without MM	0.000	0.000	0.000	0.000	.

	Intercept		266.737	13.722	239.842	293.632	<0.0001
	age, year		0.013	0.608	-1.179	1.204	0.983
	Gender	Male	-2.533	3.691	-9.766	4.701	0.493
		Female	0.000	0.000	0.000	0.000	.
ChT-	IOP, mmHg		0.535	0.692	-0.821	1.890	0.440
Out-T	SE, Diopter		4.449	0.903	2.679	6.219	<0.0001
	Grade of MM	TF	-42.077	3.965	-49.849	-34.306	<0.0001
		DCA	-84.952	6.972	-98.617	-71.287	<0.0001
		Without MM	0.000	0.000	0.000	0.000	.
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	Intercept		211.248	6.361	198.781	223.714	<0.0001
	age, year		0.618	0.282	0.065	1.170	0.028
	Gender	Male	5.340	1.711	1.987	8.693	0.002
		Female	0.000	0.000	0.000	0.000	.
Central foveal RT	IOP, mmHg		0.602	0.321	-0.027	1.230	0.061
	SE, Diopter		-0.325	0.419	-1.146	0.496	0.438
	Grade of MM	TF	-5.627	1.838	-9.229	-2.024	0.002
		DCA	-11.473	3.232	-17.807	-5.139	0.000
		Without MM	0.000	0.000	0.000	0.000	.
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	Intercept		289.071	5.390	278.508	299.635	<0.0001
	age, year		1.198	0.239	0.729	1.666	<0.0001
	Gender	Male	4.330	1.450	1.489	7.171	0.003
		Female	0.000	0.000	0.000	0.000	.
RT-In- I	IOP, mmHg		0.257	0.272	-0.275	0.790	0.344
	SE, Diopter		1.153	0.355	0.457	1.848	0.001
	Grade of MM	TF	-7.044	1.557	-10.097	-3.992	<0.0001
		DCA	-8.572	2.739	-13.940	-3.205	0.002
		Without MM	0.000	0.000	0.000	0.000	.
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	Intercept		296.171	4.999	286.372	305.970	<0.0001
	age, year		1.055	0.222	0.621	1.489	<0.0001
	Gender	Male	4.232	1.345	1.597	6.867	0.002
		Female	0.000	0.000	0.000	0.000	.
RT-In- N	IOP, mmHg		0.051	0.252	-0.443	0.545	0.841
	SE, Diopter		1.038	0.329	0.393	1.683	0.002
	Grade of MM	TF	-7.365	1.445	-10.197	-4.534	<0.0001
		DCA	-13.707	2.540	-18.686	-8.728	<0.0001
		Without MM	0.000	0.000	0.000	0.000	.

	Intercept		297.829	5.417	287.212	308.446	<0.0001
	age, year		1.003	0.240	0.533	1.473	<0.0001
	Gender	Male	3.430	1.457	0.575	6.286	0.019
		Female	0.000	0.000	0.000	0.000	.
RT-In-	IOP, mmHg		0.198	0.273	-0.337	0.733	0.468
S	SE, Diopter		1.469	0.357	0.770	2.168	<0.0001
	Grade of MM	TF	-7.456	1.565	-10.524	-4.388	<0.0001
		DCA	-12.423	2.752	-17.818	-7.029	<0.0001
		Without MM	0.000	0.000	0.000	0.000	.
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	Intercept		279.031	5.658	267.941	290.120	<0.0001
	age, year		0.961	0.251	0.469	1.452	0.000
	Gender	Male	5.444	1.522	2.462	8.427	0.000
		Female	0.000	0.000	0.000	0.000	.
RT-In-	IOP, mmHg		0.361	0.285	-0.198	0.920	0.206
T	SE, Diopter		0.960	0.372	0.230	1.690	0.010
	Grade of MM	TF	-8.070	1.635	-11.275	-4.866	<0.0001
		DCA	-11.886	2.875	-17.521	-6.252	<0.0001
		Without MM	0.000	0.000	0.000	0.000	.
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	Intercept		245.653	4.844	236.160	255.147	<0.0001
	age, year		1.024	0.215	0.603	1.444	<0.0001
	Gender	Male	1.445	1.303	-1.109	3.998	0.267
		Female	0.000	0.000	0.000	0.000	.
RT-	IOP, mmHg		0.065	0.244	-0.414	0.544	0.790
Out-I	SE, Diopter		0.890	0.319	0.265	1.514	0.005
	Grade of MM	TF	-3.898	1.400	-6.641	-1.154	0.005
		DCA	-6.076	2.461	-10.899	-1.252	0.014
		Without MM	0.000	0.000	0.000	0.000	.
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	Intercept		276.384	4.751	267.073	285.696	<0.0001
	age, year		0.951	0.211	0.539	1.364	<0.0001
	Gender	Male	0.809	1.278	-1.695	3.313	0.527
		Female	0.000	0.000	0.000	0.000	.
RT-	IOP, mmHg		0.091	0.240	-0.378	0.560	0.704
Out-N	SE, Diopter		1.035	0.313	0.423	1.648	0.001
	Grade of MM	TF	-5.862	1.373	-8.553	-3.171	<0.0001
		DCA	-8.318	2.414	-13.049	-3.587	0.001
		Without MM	0.000	0.000	0.000	0.000	.

	Intercept		262.391	5.050	252.493	272.289	<0.0001
	age, year		0.920	0.224	0.482	1.359	<0.0001
	Gender	Male	0.908	1.358	-1.755	3.570	0.504
		Female	0.000	0.000	0.000	0.000	.
RT-	IOP, mmHg		0.067	0.255	-0.432	0.566	0.791
Out-S	SE, Diopter		0.636	0.332	-0.016	1.287	0.056
	Grade of MM	TF	-4.617	1.459	-7.477	-1.757	0.002
		DCA	-7.912	2.566	-12.941	-2.883	0.002
		Without MM	0.000	0.000	0.000	0.000	.
	Intercept		240.794	5.042	230.912	250.677	<0.0001
	age, year		0.841	0.223	0.403	1.279	0.000
	Gender	Male	5.767	1.356	3.109	8.424	<0.0001
		Female	0.000	0.000	0.000	0.000	.
RT-	IOP, mmHg		0.259	0.254	-0.239	0.757	0.309
Out-T	SE, Diopter		0.496	0.332	-0.154	1.147	0.135
	Grade of MM	TF	-4.689	1.457	-7.545	-1.833	0.001
		DCA	-5.744	2.562	-10.765	-0.722	0.025
		Without MM	0.000	0.000	0.000	0.000	.

B: unstandardized coefficients; S.E.: standard error; CI: confidence interval; ChT: choroidal thickness; RT: retinal thickness; SE: spherical equivalent; IOP: intraocular pressure; MM: myopic maculopathy; TF: tessellated fundus; DCA: diffuse chorioretinal atrophy.

In and out refer to the parafoveal and perifoveal regions of the ETDRS grid, respectively. I, N, S, T refer to the inferior, nasal, superior and temporal sectors, respectively.

Statistical significance was defined as $P < 0.05$ (two-tailed).

Supplementary Table 3. Associated factors of the ChT and RT in the peripapillary region.

	Parameters	B	S.E.	95% CI		P	
				lower limit	upper limit		
ChT- Out- I	Intercept	87.054	10.200	67.062	107.047	<0.0001	
	age, year	2.966	0.451	2.083	3.850	<0.0001	
	Gender	Male	-0.798	2.733	-6.155	4.559	0.770
		Female	0.000	0.000	0.000	0.000	.
	IOP, mmHg	0.416	0.513	-0.589	1.420	0.417	
	SE, Diopter	2.173	0.669	0.862	3.484	0.001	
	Grade of MM	TF	-23.544	2.933	-29.293	-17.795	<0.0001
		DCA	-47.303	5.211	-57.517	-37.090	<0.0001
Without MM		0.000	0.000	0.000	0.000	.	
ChT- Out- N	Intercept	114.134	13.066	88.525	139.743	<0.0001	
	age, year	3.968	0.578	2.836	5.100	<0.0001	
	Gender	Male	0.787	3.501	-6.075	7.649	0.822
		Female	0.000	0.000	0.000	0.000	.
	IOP, mmHg	0.757	0.657	-0.530	2.043	0.249	
	SE, Diopter	3.332	0.857	1.652	5.011	0.000	
	Grade of MM	TF	-25.676	3.758	-33.040	-18.311	<0.0001
		DCA	-55.482	6.675	-68.565	-42.399	<0.0001
Without MM		0.000	0.000	0.000	0.000	.	
ChT- Out- S	Intercept	118.441	13.278	92.417	144.464	<0.0001	
	age, year	4.482	0.587	3.332	5.632	<0.0001	
	Gender	Male	-7.247	3.558	-14.220	-0.274	0.042
		Female	0.000	0.000	0.000	0.000	.
	IOP, mmHg	0.779	0.667	-0.529	2.087	0.243	
	SE, Diopter	3.682	0.871	1.975	5.389	<0.0001	
	Grade of MM	TF	-30.431	3.818	-37.914	-22.947	<0.0001
		DCA	-67.211	6.783	-80.505	-53.917	<0.0001
Without MM		0.000	0.000	0.000	0.000	.	
ChT- Out- T	Intercept	130.788	12.252	106.774	154.802	<0.0001	
	age, year	2.185	0.542	1.123	3.246	<0.0001	
	Gender	Male	-7.739	3.283	-14.174	-1.305	0.018
		Female	0.000	0.000	0.000	0.000	.
	IOP, mmHg	0.815	0.616	-0.391	2.022	0.185	
	SE, Diopter	4.995	0.804	3.420	6.570	<0.0001	
	Grade of MM	TF	-38.144	3.523	-45.050	-31.238	<0.0001
		DCA	-61.512	6.259	-73.780	-49.244	<0.0001

		Without MM	0.000	0.000	0.000	0.000	.	
RT- Out- I	Intercept		249.953	6.646	236.927	262.979	<0.0001	
	age, year		0.870	0.294	0.294	1.446	0.003	
	Gender	Male		2.073	1.781	-1.417	5.563	0.244
		Female		0.000	0.000	0.000	0.000	.
	IOP, mmHg		0.356	0.334	-0.299	1.010	0.287	
	SE, Diopter		0.844	0.436	-0.010	1.698	0.053	
	Grade of MM	TF		-4.053	1.911	-7.799	-0.307	0.034
		DCA		-1.365	3.395	-8.019	5.289	0.688
Without MM			0.000	0.000	0.000	0.000	.	
RT- Out- N	Intercept		233.285	6.241	221.054	245.517	<0.0001	
	age, year		0.607	0.276	0.066	1.148	0.028	
	Gender	Male		2.259	1.672	-1.019	5.536	0.177
		Female		0.000	0.000	0.000	0.000	.
	IOP, mmHg		0.029	0.314	-0.586	0.643	0.928	
	SE, Diopter		1.368	0.409	0.566	2.171	0.001	
	Grade of MM	TF		-4.787	1.795	-8.304	-1.269	0.008
		DCA		-5.492	3.188	-11.741	0.756	0.085
Without MM			0.000	0.000	0.000	0.000	.	
RT- Out- S	Intercept		283.963	7.818	268.641	299.285	<0.0001	
	age, year		1.082	0.346	0.404	1.759	0.002	
	Gender	Male		5.340	2.095	1.234	9.446	0.011
		Female		0.000	0.000	0.000	0.000	.
	IOP, mmHg		-0.486	0.393	-1.255	0.284	0.216	
	SE, Diopter		1.239	0.513	0.234	2.244	0.016	
	Grade of MM	TF		-3.636	2.248	-8.042	0.771	0.106
		DCA		-8.899	3.994	-16.727	-1.072	0.026
Without MM			0.000	0.000	0.000	0.000	.	
RT- Out- T	Intercept		274.379	5.903	262.810	285.948	<0.0001	
	age, year		1.254	0.261	0.743	1.765	<0.0001	
	Gender	Male		-0.815	1.582	-3.915	2.285	0.607
		Female		0.000	0.000	0.000	0.000	.
	IOP, mmHg		-0.030	0.297	-0.611	0.552	0.921	
	SE, Diopter		0.941	0.387	0.182	1.700	0.015	
	Grade of MM	TF		-3.261	1.697	-6.588	0.066	0.055
		DCA		-1.874	3.015	-7.784	4.037	0.534
Without MM			0.000	0.000	0.000	0.000	.	

In the peripapillary region, only the outer circle of the ETDRS grid was analysed. I, N, S, T refer to the

inferior, nasal, superior and temporal sectors, respectively.

B: unstandardized coefficients; S.E.: standard error; CI: confidence interval; ChT: choroidal thickness;

RT: retinal thickness; SE: spherical equivalent; IOP: intraocular pressure; MM: myopic maculopathy;

TF: tessellated fundus; DCA: diffuse chorioretinal atrophy.

Statistical significance was defined as $P < 0.05$ (two-tailed).