

**Supplementary Materials Table S1.** Median with interquartile range for all white matter pathways and DTI-based parametric values.

White Matter Pathway	AD			FA			RD		
	HC	TBI	rSRC	HC	TBI	rSRC	HC	TBI	rSRC
AC	1.224	1.259	1.252	0.402	0.394	0.423	0.649	0.716	0.630
	1.134–1.318	1.190–1.345	1.177–1.336	0.348–0.462	0.290–0.43	0.367–0.480	0.604–0.721	0.656–0.807	0.589–0.694
AF L	1.099	1.149	1.127	0.418	0.448	0.445	0.577	0.572	0.561
	1.071–1.139	1.093–1.168	1.091–1.153	0.380–0.454	0.390–0.464	0.404–0.469	0.558–0.608	0.552–0.605	0.543–0.599
AF R	1.131	1.137	1.129	0.469	0.453	0.416	0.527	0.551	0.524
	1.050–1.181	1.104–1.166	1.051–1.161	0.341–0.519	0.346–0.495	0.351–0.517	0.496–0.624	0.512–0.639	0.494–0.606
Internal capsule Anterior L	1.235	1.410	1.254	0.453	0.414	0.464	0.604	0.794	0.596
	1.193–1.278	1.348–1.457	1.217–1.273	0.439–0.467	0.398–0.426	0.446–0.475	0.585–0.633	0.722–0.814	0.580–0.626
Internal capsule Anterior R	1.173	1.320	1.188	0.454	0.426	0.475	0.561	0.680	0.567
	1.144–1.241	1.296–1.339	1.150–1.237	0.411–0.485	0.376–0.461	0.460–0.480	0.536–0.616	0.626–0.735	0.536–0.609
FAT L	1.140	1.184	1.145	0.442	0.419	0.445	0.565	0.595	0.563
	1.105–1.199	1.123–1.234	1.108–1.230	0.362–0.515	0.347–0.481	0.377–0.525	0.517–0.632	0.553–0.672	0.516–0.614
FAT R	1.127	1.126	1.123	0.357	0.319	0.371	0.630	0.677	0.617
	1.077–1.156	1.098–1.183	1.086–1.167	0.289–0.402	0.240–0.411	0.294–0.428	0.586–0.725	0.593–0.841	0.575–0.730
ATR L	1.187	1.234	1.196	0.419	0.360	0.439	0.597	0.709	0.581
	1.102–1.274	1.182–1.472	1.137–1.277	0.353–0.493	0.313–0.440	0.370–0.499	0.553–0.642	0.607–0.921	0.538–0.653
ATR R	1.185	1.286	1.164	0.397	0.363	0.404	0.624	0.749	0.602
	1.118–1.247	1.199–1.469	1.113–1.263	0.334–0.462	0.299–0.404	0.319–0.507	0.568–0.670	0.670–0.933	0.540–0.671
Ci L	1.147	1.180	1.186	0.371	0.323	0.366	0.652	0.703	0.651
	1.060–1.273	1.086–1.258	1.087–1.336	0.291–0.414	0.272–0.351	0.299–0.431	0.614–0.689	0.673–0.778	0.631–0.704
Ci R	1.154	1.192	1.173	0.367	0.358	0.381	0.624	0.663	0.619
	1.119–1.207	1.146–1.244	1.127–1.227	0.339–0.428	0.325–0.429	0.355–0.430	0.605–0.668	0.621–0.719	0.603–0.651
CS L	1.171	1.238	1.177	0.542	0.531	0.540	0.468	0.504	0.469
	1.102–1.368	1.145–1.406	1.117–1.390	0.465–0.690	0.451–0.656	0.468–0.692	0.384–0.525	0.425–0.558	0.387–0.524
CS R	1.151	1.249	1.162	0.531	0.507	0.523	0.508	0.534	0.500
	1.088–1.352	1.119–1.374	1.092–1.344	0.420–0.642	0.410–0.620	0.425–0.636	0.447–0.558	0.461–0.593	0.461–0.561
External capsule L	1.191	1.217	1.197	0.442	0.427	0.452	0.579	0.612	0.577
	1.160–1.337	1.181–1.397	1.167–1.336	0.426–0.462	0.404–0.460	0.426–0.462	0.561–0.652	0.575–0.754	0.551–0.637

External capsule R	1.220	1.247	1.225	0.452	0.439	0.457	0.589	0.622	0.583
	1.139–1.252	1.202–1.336	1.134–1.261	0.380–0.491	0.372–0.486	0.379–0.492	0.558–0.634	0.609–0.680	0.560–0.629
FM	1.536	1.673	1.564	0.558	0.536	0.615	0.581	0.697	0.518
	1.229–1.680	1.331–1.811	1.209–1.658	0.363–0.696	0.359–0.632	0.394–0.717	0.525–0.702	0.652–0.778	0.455–0.641
Fo L	1.670	2.306	1.597	0.368	0.305	0.368	0.968	1.502	0.931
	1.568–1.872	2.050–2.448	1.510–1.761	0.322–0.393	0.281–0.333	0.329–0.405	0.886–1.047	1.272–1.633	0.842–0.999
Fo R	1.693	2.416	1.586	0.315	0.267	0.328	1.011	1.615	0.918
	1.593–1.902	1.853–2.578	1.501–1.849	0.304–0.378	0.248–0.308	0.316–0.398	0.868–1.229	1.146–1.866	0.831–1.159
Genu CC	1.265	1.296	1.248	0.448	0.425	0.460	0.613	0.670	0.595
	1.180–1.481	1.190–1.623	1.156–1.483	0.419–0.653	0.382–0.615	0.419–0.688	0.490–0.633	0.596–0.715	0.438–0.618
hSLF L	1.096	1.128	1.099	0.390	0.373	0.386	0.608	0.659	0.608
	1.083–1.116	1.115–1.146	1.081–1.119	0.354–0.407	0.341–0.393	0.362–0.403	0.585–0.645	0.615–0.700	0.581–0.645
hSLF R	1.079	1.114	1.084	0.381	0.358	0.384	0.609	0.659	0.600
	1.076–1.085	1.109–1.124	1.075–1.095	0.329–0.399	0.318–0.374	0.329–0.402	0.589–0.669	0.641–0.721	0.582–0.675
IFOF L	1.232	1.270	1.248	0.454	0.444	0.464	0.583	0.619	0.581
	1.164–1.459	1.199–1.532	1.192–1.460	0.433–0.487	0.400–0.482	0.437–0.493	0.556–0.651	0.569–0.724	0.542–0.634
IFOF R	1.260	1.281	1.261	0.480	0.464	0.487	0.572	0.618	0.565
	1.146–1.302	1.216–1.385	1.136–1.315	0.398–0.523	0.389–0.533	0.393–0.528	0.540–0.616	0.589–0.669	0.543–0.618
ILF L	1.266	1.292	1.291	0.454	0.454	0.478	0.600	0.642	0.594
	1.112–1.389	1.140–1.1426	1.137–1.389	0.354–0.536	0.351–0.505	0.378–0.529	0.548–0.634	0.604–0.675	0.553–0.630
ILF R	1.142	1.177	1.165	0.449	0.423	0.455	0.547	0.595	0.544
	1.109–1.244	1.134–1.252	1.109–1.237	0.369–0.537	0.359–0.527	0.396–0.529	0.501–0.620	0.525–0.657	0.502–0.596
MLF L	1.250	1.255	1.301	0.464	0.453	0.483	0.590	0.646	0.597
	1.097–1.366	1.105–1.382	1.091–1.389	0.285–0.537	0.293–0.507	0.315–0.553	0.544–0.703	0.587–0.711	0.538–0.690
MLF R	1.168	1.164	1.164	0.453	0.416	0.462	0.574	0.602	0.554
	1.110–1.235	1.108–1.261	1.094–1.246	0.396–0.476	0.354–0.467	0.403–0.497	0.551–0.602	0.568–0.636	0.540–0.584
OR L	1.292	1.551	1.363	0.393	0.365	0.414	0.688	0.865	0.708
	1.117–1.569	1.174–1.920	1.171–1.450	0.324–0.520	0.305–0.479	0.332–0.515	0.539–0.902	0.616–1.174	0.544–0.841
OR R	1.311	1.391	1.321	0.550	0.547	0.547	0.548	0.603	0.516
	1.201–1.375	1.240–1.468	1.198–1.363	0.501–0.580	0.479–0.581	0.508–0.580	0.480–0.593	0.492–0.648	0.493–0.564
Internal capsule posterior L	1.191	1.285	1.206	0.531	0.506	0.527	0.500	0.569	0.499
	1.154–1.278	1.190–1.333	1.158–1.301	0.481–0.587	0.446–0.552	0.477–0.585	0.466–0.537	0.531–0.594	0.468–0.535

Internal capsule posterior R	1.206	1.283	1.210	0.506	0.488	0.503	0.555	0.589	0.555
	1.115–1.273	1.159–1.356	1.110–1.277	0.432–0.564	0.420–0.553	0.424–0.555	0.489–0.575	0.517–0.656	0.504–0.575
UF L	1.138	1.163	1.149	0.323	0.315	0.338	0.694	0.707	0.680
	1.125–1.175	1.139–1.241	1.109–1.186	0.260–0.356	0.248–0.347	0.286–0.363	0.660–0.744	0.694–0.756	0.653–0.717
UF R	1.177	1.182	1.173	0.341	0.318	0.358	0.694	0.701	0.668
	1.095–1.210	1.106–1.230	1.100–1.192	0.252–0.384	0.236–0.365	0.282–0.382	0.658–0.741	0.688–0.754	0.644–0.703
VO L	1.160	1.129	1.164	0.452	0.431	0.450	0.564	0.580	0.561
	1.021–1.288	1.072–1.249	1.069–1.245	0.321–0.539	0.304–0.491	0.325–0.521	0.524–0.623	0.558–0.666	0.521–0.642
VO R	1.022	1.053	1.033	0.369	0.366	0.346	0.590	0.603	0.606
	0.997–1.119	1.018–1.129	1.002–1.095	0.279–0.467	0.277–0.446	0.271–0.436	0.526–0.669	0.551–0.663	0.512–0.651
vSLF L	1.058	1.083	1.082	0.358	0.330	0.363	0.616	0.690	0.622
	1.041–1.139	1.057–1.159	1.058–1.139	0.249–0.436	0.222–0.417	0.262–0.447	0.548–0.732	0.578–0.772	0.641–0.725
vSLF R	1.022	1.067	1.029	0.325	0.294	0.367	0.620	0.662	0.589
	1.002–1.075	1.026–1.092	1.012–1.091	0.235–0.432	0.225–0.385	0.253–0.432	0.539–0.718	0.588–0.781	0.540–0.694

Grey shadowed cells indicate significant difference ( $p < 0.05$ ) between TBI and HC or rSRC and HC calculated with Kruskal–Wallis test with Dunn’s test to correct for multiple comparisons. The exact  $p$ -values can be found in Table 2.