

Table 1. VBM results of DTI studies in schizophrenia. Age and duration in years, standard deviation in parenthesis. B in s/mm², FOV in mm., n.s. = not specified

#	Study	Subjects	Subject info	Image	Analysis	Results
1	Park et al. (2004)	23 male schizophrenia patients, 32 healthy male controls	Age: 43(7), onset: unknown, medication: n.s.	1.5 Tesla GE, Line scan diffusion imaging, 6 dir., b=1000s/mm ² , FOV=220x165, slice=4mm, gap=1mm, TE=64ms, TR=2.5s	6 FWHM	Patients show reduced hemispheric asymmetry compared to controls
2	Buchsbaum et al. (2006)	64 chronic schizophrenia patients, 55 healthy controls	Age: 42(13), onset: 24(7), medication: antipsychotic	3.0 Tesla Siemens, Pulsed gradient spin-echo, 12 dir., slice=3mm, TE, TR n.s.	n.s.	FA reduction in frontal WM in schizophrenia patients
3	Mori et al. (2007)	42 chronic schizophrenia patients, 42 healthy controls	Age: 40(9), duration: 16(9), medication: antipsychotic	1.5 Tesla Siemens, SS-EPI, 6 dir., b=1000, FOV=240, slice=5mm, gap=1.5mm, TE=100ms, TR=4s	0, 2, 4, 6, 8, 10, 12, 14, 16 mm FWHM	Patients showed lower FA in frontal, temporal, UF and cingulum
4	White et al. (2007)	14 adolescent schizophrenia patients, 15 healthy adolescent controls	Age: 15(2), onset: 13(2), medication: antipsychotic	3.0 Tesla Siemens, Single shot spin echo planar image, 12 dir., b=1000, FOV=256mm, voxel=2mm ³ , TE, TR n.s.	5mm FWHM	Adolescents with schizophrenia show abnormalities in left posterior hippocampus
5	Miyata et al. (2009)	27 schizophrenia patients, 33 healthy controls	Age: 38(9), duration: 14(9), medication: antipsychotic	3.0 Tesla Siemens, 12 dir., b=700, FOV=220x220, slice=3mm, TE=79ms, TR=5.2s	TBSS, min FA=0.2, no smoothing	FA reduction in left PF and left occipital WM, gray matter reductions in bilateral PF, temporal and subcortical
6	Sussmann et al. (2009)	28 familial schizophrenia patients, 38 healthy controls	Age: 38(10), duration: 16(10), medication: antipsychotic	1.5 Tesla GE, SS-EPI, 51 dir., b=1000, voxel, TE, TR n.s.	12mm FWHM	Patients show deficits in WM in anterior limb of internal capsule, UF and ATR
7	Pomarol-Clotet et al. (2010)	32 chronic schizophrenia patients, 32 healthy controls	Age: 41(9), duration: 21(9), medication: neuroleptic	1.5 Tesla GE, 25 dir., b=500,750,1000, FOV=289x289, voxel: 1.13x1.13x5mm ³ , TE=107ms, TR=8s	TBSS, 4mm smoothing	Medial PFC, dorsolateral PFC abnormal in schizophrenia
8	Chan et al. (2010)	39 first episode schizophrenia, 64 healthy controls	Age: 29(7), duration: 1(0), medication: antipsychotic	3.0 Tesla Philips, Single shot echo-planar, 15 dir., b=800, FOV=230x230 slice=3mm, no gap, TE=56ms, TR=3.7s,	No smoothing	Patients showed lower WM FA in right ILF

Table 2. Tractography results of DTI studies of schizophrenia. Age and duration in years, standard deviation in parenthesis. B in s/mm², FOV in mm., n.s. = not specified

#	Study	Subjects	Subject info	Image	Analysis	Results
1	Kanaan et al. (2006)	33 schizophrenia patients, 43 healthy controls	Age: 32(10), duration: 7(7), medication: antipsychotic	GE signal LG, 64 dir., b=1300s/mm ² , FOV=240, voxel=2.5mm ³ , TE=107ms, TR=n.s.	ROI of genu of CC	Sign. difference between patient and control group in FA in genu of CC
2	Jones et al. (2006)	14 male schizophrenia patients, 14 healthy male controls	Age: 34(9), duration: 8, medication: antipsychotic	1.5 Tesla GE, b=1300, FOV=240x240, voxel=2.5mm ³ , gap=0mm, TE=107ms, TR=n.s.	FA>0.15, ROI of cingulum, UF, SLF, IFOF	Lower FA only in left SLF in younger patients, not in older patients compared to controls
3	Price et al. (2007)	18 first episode psychosis patients, 21 healthy controls	Age: 25, duration: 1(1), medication: antipsychotic	1.5 Tesla GE, SS-EPI, 54 dir., b=1000, FOV=220x220, slice=2.3mm, TE=96ms, TR=n.s.	Probabilistic, angle<180deg, ROI in CC	Altered inter-hemispheric connectivity due to reduced FA in CC in first episode patients
4	Price et al. (2008)	19 first episode psychosis patients, 23 healthy controls	Age: 25(6), duration: 1(1), medication: antipsychotic	1.5 Tesla GE, SS-EPI, 54 dir., b=1000, FOV=220x220, slice=2.3mm, TE=96ms, TR=n.s.	Probabilistic, ROI in UF	Altered distribution of FA in UF in first episode patients compared to controls
5	McIntosh et al. (2008)	25 chronic schizophrenia patients, 49 healthy controls	Age: 37(9), duration: 16(10), medication: antipsychotic	1.5 Tesla GE, 51 dir., FOV=220x220, slice=2.8mm, TE, TR n.s.	Probabilistic with TBSS, ROI in UF and anterior thalamic radiation	FA reductions in UF and ATR, unrelated to age, duration of illness, medication
6	Nestor et al. (2008)	25 chronic male schizophrenia patients, 28 healthy male controls	Age: 40(9), duration: 16(10), medication: neuroleptic	1.5 Tesla GE, Line scan dif img., 6 dir., b=1000,FOV=220x165, slice=4mm, gap=1mm, TE=64ms,TR=2.5s	Deterministic, streamline, FA>0.15, angle<20deg/mm, ROI in cingulum and UF	Reduced FA in bilateral cingulum but not UF for patients compared to controls

#	Study	Subjects	Subject info	Image	Analysis	Results
7	Kubicki et al. (2008)	32 chronic patients, 42 healthy controls	Age: 18-50, duration and medication n.s.	1.5 Tesla GE, Line scan dif img., 6 dir., b=1000, voxel=n.s., TE, TR n.s.	Probabilistic tractography of CC	Decreased FA in CC in patients with schizophrenia
8	Rosenberger et al. (2008)	27 male schizophrenia patients, 34 healthy male controls	Age: 40(9), duration n.s., medication: antipsychotic	1.5 Tesla GE, Line scan dif img., 6 dir., b=1000, voxel=1.7x1.7x4mm, TE, TR n.s.	FA>0.15, angle<20deg/mm, ROI of cingulum, UF, IFOF	Age related decline of cingulum and UF but not IFOF, no effect of illness duration, medication
9	Friedman et al. (2008)	40 first episode schizophrenia patients, 40 chronic schizophrenia patients, 80 healthy controls	Age: 25(5), onset: 24(5), medication: antipsychotic	3.0 Tesla Siemens, Pulsed-gradient spin-echo, 12 dir., b=1250, FOV=210, slice=3mm, gap=1mm, TE=80ms, TR=4.1s	ROI of forceps, genu and splenium of CC, ILF	Modest widespread FA reductions in chronic schizophrenia patients, less in first episode patients
10	Mandl et al. (2008)	40 schizophrenia patients, 40 healthy controls	Age: 27(6), duration: 25(17), medication: antipsychotic	1.5 Tesla Philips, 32 dir., b=1000, FOV=240, slice=2.5mm, TE=88ms, TR=9.8s	Multiple ROI of genu of CC and UF, FACT, FA>0.15, angle<45deg	Negative corr. FA left UF and age, and higher MTR in right UF in patients
11	Fitzsimmons et al. (2009)	36 male chronic schizophrenia patients, 35 healthy male controls	Age: 30-50, onset: 21(4), medication: antipsychotic	1.5 Tesla GE, Line scan dif img., 6 dir., b=1000, FOV=220x165, slice=4mm, gap=1mm, TE=64ms, TR=2.5s	Multiple ROI of fornix	Decreased FA in the left and right fornix in patients compared to controls
12	Phillips et al. (2009)	23 chronic schizophrenia patients, 22 healthy controls	Age: 34(9), Onset: 21(4), medication n.s.	1.5 Tesla Siemens, 30 dir., b=1000, FOV=240x240, voxel=2.5mm ³ , TE=83ms, TR=6.4s,	FACT, Multiple ROI of ILF, AF and UF	Lower FA values in patients compared to controls in the ILF, AF but not UF
13	Voineskos et al. (2010)	50 chronic schizophrenia patients, 50 healthy controls	Age: 40(12)+65(6), onset: 23(5)+30(13), medication n.s.	1.5 Tesla GE, 23 dir., b=1000, FOV=330mm, matrix 128x128, voxel=2.6mm ³ , gap=0mm, TE=85.5ms, TR=15s	Whole brain streamline, track clustering	Left UF and right cingulum show decrease FA in younger patients + no greater aging effects