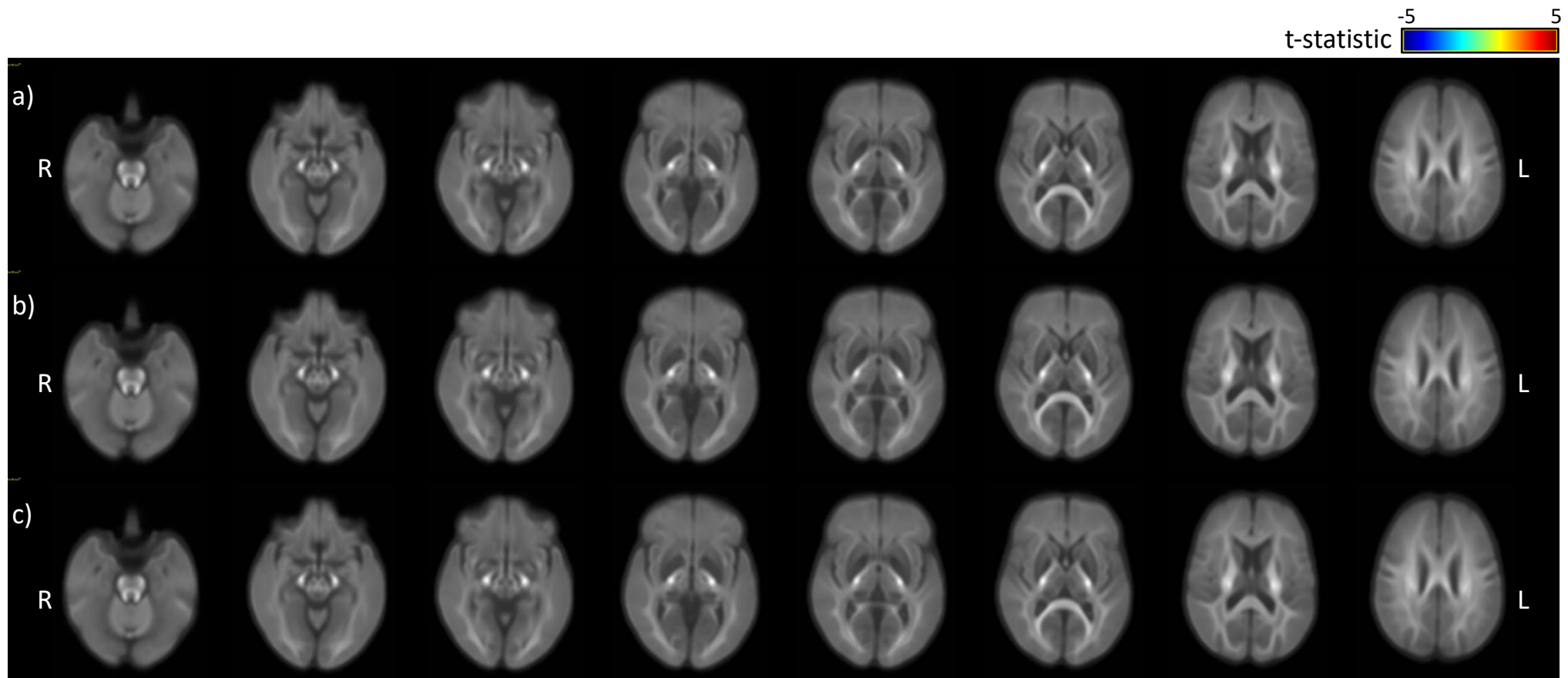


**A fixel-based analysis of micro- and macro-structural changes to white  
matter following adult traumatic brain injury**

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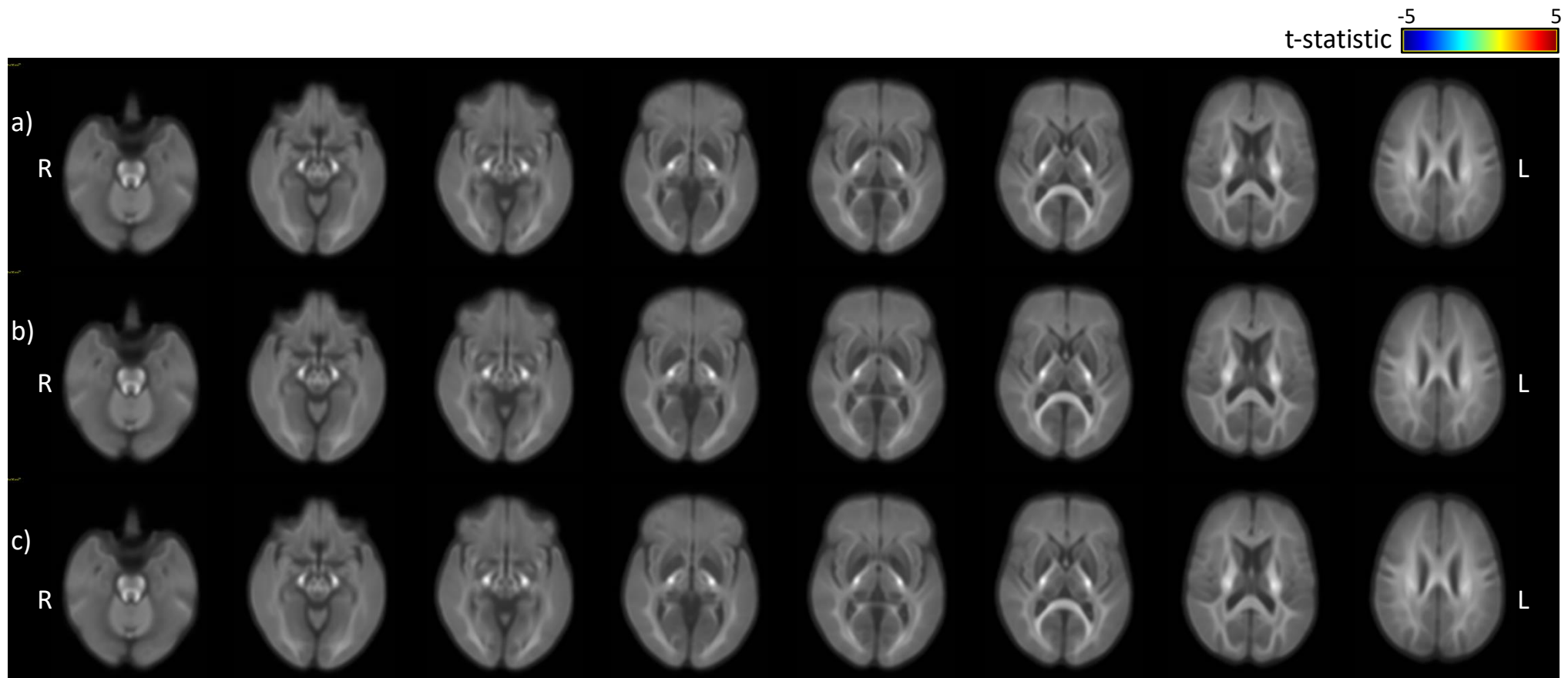
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Supplementary Figure S1. Fixels showing significant differences in the fibre density (FD), fibre-bundle cross-section (FC) and fibre density and bundle cross-section (FDC) of the healthy and orthopaedic and control groups, controlling for age and sex (all analyses), and brain volume (FC and FDC) and colour coded by effect size (t-statistic, thresholded at  $p < .05$ ):

- (a) FD;
- (b) FC;
- (c) FDC

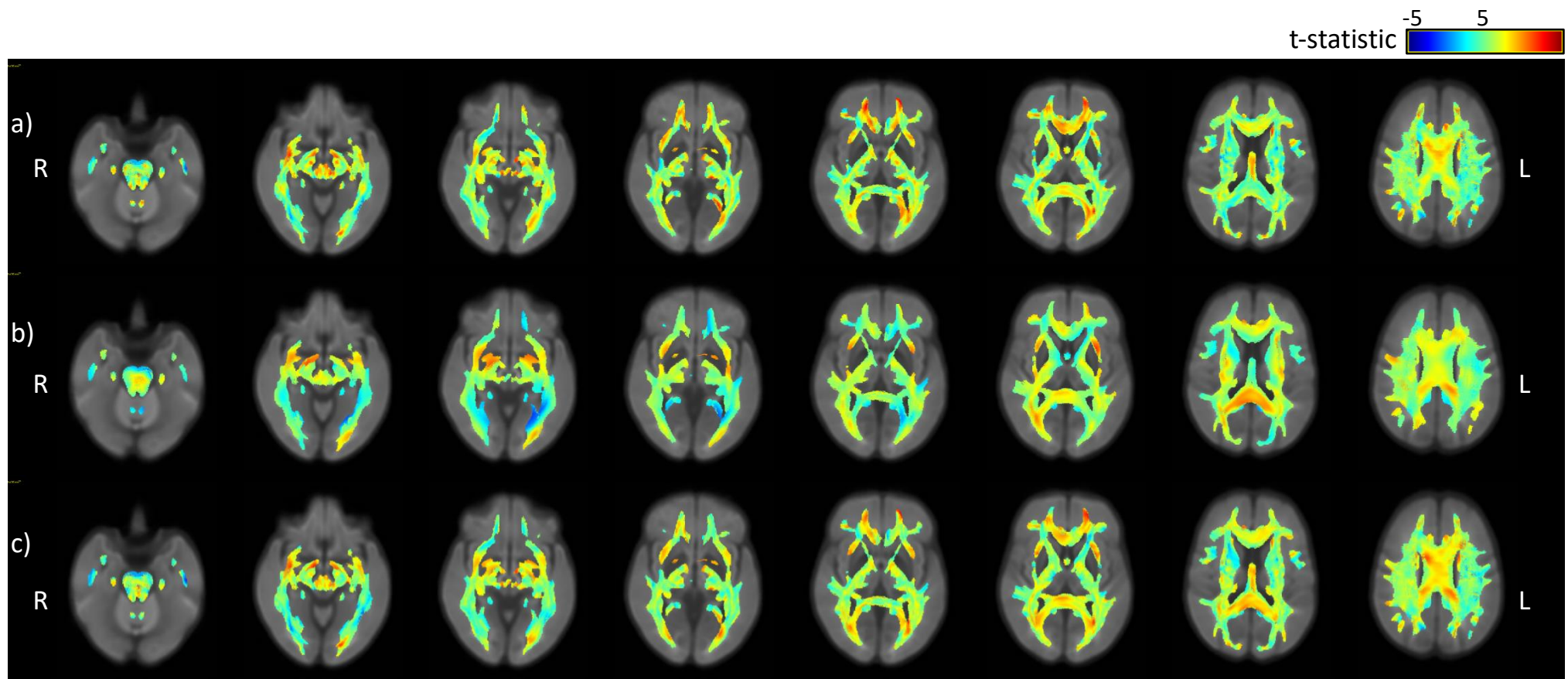
No statistically significant group differences were observed.



Supplementary Figure S2. Fixels showing significant differences in the fibre density (FD), fibre-bundle cross-section (FC) and fibre density and bundle cross-section (FDC) of the mild TBI and control groups, controlling for age and sex (all analyses), and brain volume (FC and FDC) and colour coded by effect size (t-statistic, thresholded at  $p < .05$ ):

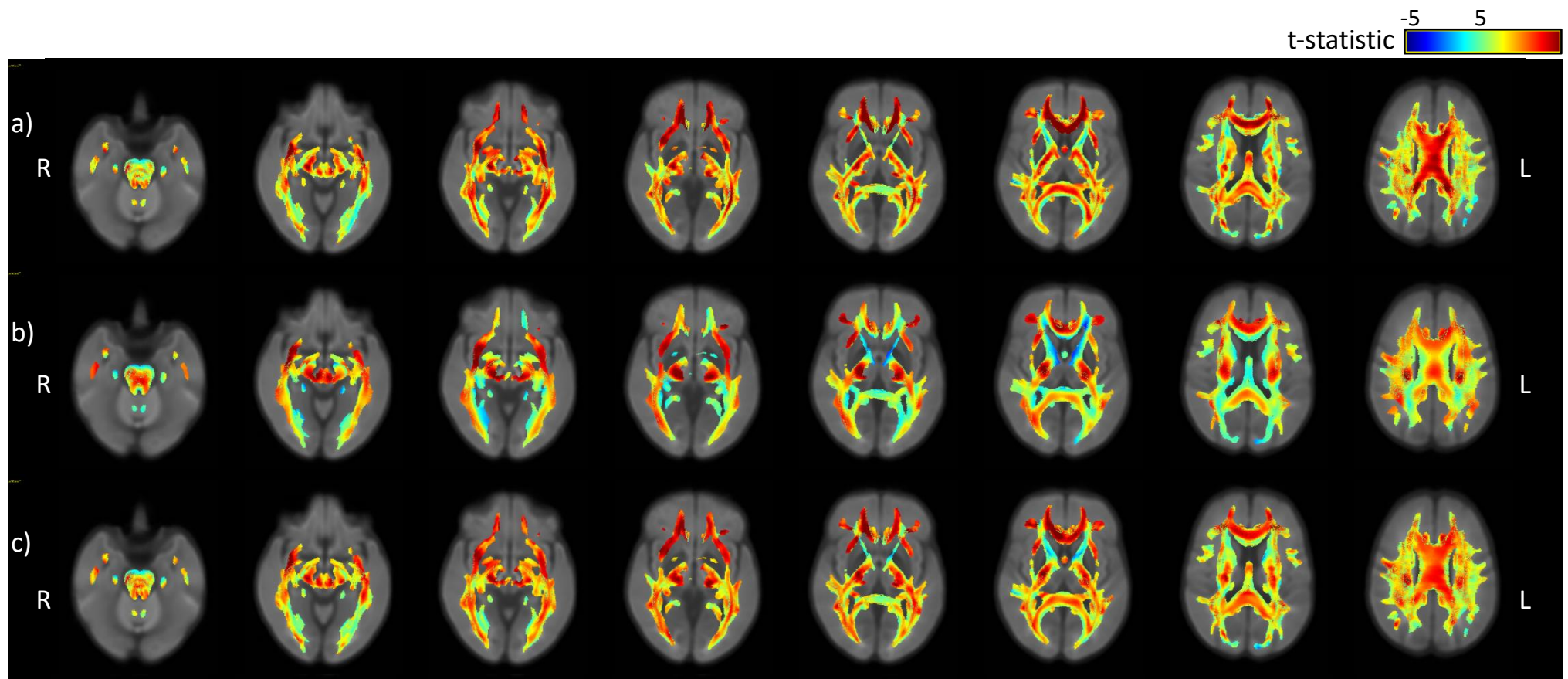
- (a) FD;
- (b) FC;
- (c) FDC

No statistically significant group differences were observed.



Supplementary Figure S3. Fixels showing un-thresholded differences in the fibre density (FD), fibre-bundle cross-section (FC) and fibre density and bundle cross-section (FDC) of the mild TBI and control groups, controlling for age and sex (all analyses), and brain volume (FC and FDC) and colour coded by effect size (t-statistic) thresholded at  $p < .05$ :

- (a) FD;
- (b) FC;
- (c) FDC



Supplementary Figure S4. Fixels showing un-thresholded differences in the fibre density (FD), fibre-bundle cross-section (FC) and fibre density and bundle cross-section (FDC) of the moderate-severe TBI and control groups, controlling for age and sex (all analyses), and brain volume (FC and FDC) and colour coded by effect size (t-statistic) thresholded at  $p < .05$ :

- (a) FD;
- (b) FC;
- (c) FDC