Results showed significant rightward asymmetries of callosal thickness predominantly in the anterior body and anterior third of the callosum in the whole sample and in males.

B. Rightward asymmetries in females were less significant and restricted to smaller regions of the anterior body, anterior third, isthmus and splenium.

C. There was no callosal region with significant leftward asymmetries.

**Conclusion**

- Hemispheric differences in the thickness of the CC might reflect organizational pattern of callosal projections, suggesting a more diffuse functional organization in the right hemisphere.
- Our gender-specific findings support a dimorphic organization in male and female brains that appears to involve hemispheric relations and is reflected in the organization and distribution of callosal fibers.