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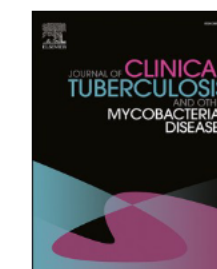
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Case Report

### Comparison TLR2 and TLR4 serum levels in children with pulmonary and extrapulmonary tuberculosis with and without a Bacillus Calmette-Guérin (BCG) scar



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#### ABSTRACT

The formation of a scar after *Mycobacterium bovis* Bacillus Calmette-Guérin (BCG) vaccination influences the effectiveness of protection against *Mycobacterium tuberculosis* (MTB) infection. The innate immunity plays a critical role both in the pathophysiology of tuberculosis (TB) and BCG vaccination protection mechanism. Parts of innate immunity: macrophages, dendritic cells, and neutrophils, have microbial recognition surface receptors called Toll-like receptors (TLR) 2 and 4. The objective of this study is to compare the serum levels of TLR2 and TLR4 in BCG-vaccinated pediatric patients with pulmonary and extrapulmonary TB. This cross-sectional study