The effect of unfavorable intrauterine environment on the renal functional capacity in adulthood: meta-analysis
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Objective
Evidence suggests that an adverse environment during intrauterine life and early childhood is a risk factor for a wide spectrum of disorders later in life, including cardiovascular and renal diseases. We aim to evaluate the role of intrauterine growth restriction in kidney disease in adulthood.

Methods
An electronic search was conducted in October 2016 in the CENTRAL, LILACS, MEDLINE, and EMBASE databases. The inclusion criteria were studies comparing renal function in adulthood with birth weight using transvers or longitudinal designs. The reviewers analyzed the inclusion criteria and risk bias and extracted data from the included studies.

Results
Twenty articles met the inclusion criteria for the systematic review, and 13 were included in the meta-analysis. There was an increased risk of developing end-stage renal disease (risk ratio (RR) 1.31, 95% confidence interval (CI): 1.17, 1.47), a lower glomerular filtration rate (ml/min) (mean difference (MD) -7.14; 95% CI: -12.12, -2.16), microalbuminuria (RR 1.40; 95% CI: 1.28, 1.52) or a small increase in the albumin/creatinine ratio (MD 0.46; 95% CI: 0.03, 0.90) in the low birthweight group.

Conclusion
Our results suggest that low birth weight is related to renal dysfunction in adulthood.