In 2003, we published a meta-analysis of randomized controlled studies (RCTs) on ultrasound-guided embryo transfer compared to the clinical touch method. Since then, many studies were conducted and published with contradictory results. The aim of this work was to conduct an updated meta-analysis on the subject. A meta-analysis of RCTs was conducted. A search of the relevant papers in the medical literature was carried out. The papers were reviewed by the first two authors and only properly conducted RCTs were included. Any conflict was resolved by consensus with the third author. A total of 274 studies were retrieved from the literature, but only 16 of them fitted our selection criteria. The primary outcome measures were the clinical pregnancy, ongoing pregnancy and live birth rates. The secondary outcome measures were the incidence of ectopic pregnancies, miscarriage rate, rate of multiple pregnancies and incidence of difficulties encountered during embryo transfer. The results show that the clinical pregnancy rate (16 studies) was significantly higher in the ultrasound-guided group (36.8%) compared to the clinical touch group (30.1%) \[P<0.0001; \text{OR} = 1.440 \text{ (95\% CI} = 1.274-1.627)\]. The ongoing pregnancy rate (7 studies) in the ultrasound-guided group (35.2%) was also significantly higher compared to the clinical touch group (28.7%) \[P=0.001; \text{OR} = 1.345 \text{ (95\% CI} = 1.135-1.594)\]. The live birth rate (2 studies) was similarly significantly higher in the ultrasound-guided group (25.9%) compared to the clinical touch group (10.6%) \[P=0.01; \text{OR} = 1.695 \text{ (95\% CI} = 1.146-2.507)\]. There were no statistically significant differences between both groups in the incidence of ectopic pregnancies, miscarriage or multiple pregnancy rates or in the difficulties encountered during embryo. It is concluded that this updated meta-analysis confirms that ultrasound-guided embryo transfer increases the clinical pregnancy, ongoing pregnancy and live birth rates significantly compared to the clinical touch method.