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From 'nothing' to inflation and back again

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Solutions of Wheeler-DeWitt equation in a minisuperspace with massive scalar field are constructed, following step by step the procedure developed for the description of a particle escaping from a two-dimensional potential well by Banks, Bender and Wu. For an inflationary universe driven by an unstable and metastable false vacuum, the solution describing tunneling of a universe from 'nothing' and the no-boundary solution are obtained, respectively. New features of the solutions coming from the indefinite metric in the kinetic term are pointed out and possible implications of the solutions for the theory of vacuum decay via Hawking-Moss and Coleman-de Lucia instantons are discussed.