Assume that the mode I plane strain fracture toughness (K_{IC}) for partially stabilized zirconia is 10 MPa.m$^{1/2}$. Assume a **VERY** wide plate (W>>a) of this material contains an edge crack 100 μm deep and is subjected to a 300 MPa tensile stress applied normal to that crack. Determine if this plate fail by fracture (crack will propagate through).