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IV thrombolysis with recombinant tissue plasminogen activator within the first 3 hours of stroke symptom onset remains the only FDA-approved treatment in the United States. Comparison of endovascular stroke therapies over the last two decades demonstrates a significant improvement in recanalization rates. Yet, three recently published randomized trials (IMS III, MR RESCUE, and SYNTHESIS Expansion) comparing an endovascular approach to conservative medical management or intravenous thrombolysis in the setting of acute ischemic stroke did not demonstrate any significant benefit of the endovascular therapies in achieving good neurologic outcomes. In this presentation, we will review the evolution of endovascular treatment strategies for the treatment of acute stroke and analyze the design, results, and limitations of the three recently published trials. The critical role of patient selection based on the presence of large-vessel occlusion and favorable ‘penumbral’ pattern will be discussed. The superiority of newer endovascular technology including stent-retriever devices (which were significantly underutilized in those three trials) over earlier technology will be demonstrated. Finally, we will review future directions of endovascular therapy for acute stroke.