Randomized Trial of Conventional Transseptal Needle Versus Radiofrequency Energy Needle Puncture for Left Atrial Access (the TRAVERSE –LA Study)

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HIGHLIGHTS

- **Study Design:** Randomized, Prospective, Controlled Trial. 72 patients were randomized to either the NRG® RF Transseptal Needle or conventional transseptal needle on a 1:1 basis.

- **Primary Outcome:** Median transseptal procedure time was 68% lower in RF needle group compared with conventional needle group on an intention-to-treat basis.

- **Secondary Outcome:**
  - RF needle group did not experience transseptal procedure failure with assigned needle: 0 out of 36 cases (0%).
  - Conventional needle group experienced 10 failures in 36 cases (27.8%). Subsequent crossover to RF needle enabled successful transseptal procedure in all cases.

- **Secondary Outcome:**
  - In pre-procedural ex vivo testing that involved advancement of the needle through the plastic dilator and sheath, the conventional needle produced visible plastic particles in 33.3% of cases whereas the RF needle did not produce visible particles in any cases (0%).