Encouraging results of ablation therapy in patients with paroxysmal atrial fibrillation (AF) have prompted changes in professional practice guidelines. The most recent European guidelines have suggested that ablation might be offered as first-line therapy in selected patients. Cryoballoon ablation is a promising technology in interventional AF therapy. Two different sizes of the cryoballoon are currently available: a smaller (23 mm) and a larger (28 mm) balloon relative to the ostial diameter of the pulmonary veins. New tools, the circular mapping catheter and the use of intracardiac echocardiography, provide important periprocedural information. A meta-analysis of previous studies revealed outcome data with an AF-free survival rate of 72.83% at the 1-year follow-up in paroxysmal AF patients undergoing cryoballoon ablation. The most frequent, but reversible complication is phrenic nerve palsy with reported incidences up to 10%. All efforts must be taken to overcome this limitation, since the overall major complication rate tends to be lower in cryoballoon compared to radiofrequency ablation. In persistent AF, reported results in cryoballoon ablation had a limited success rate below 50% after a single procedure. A double balloon approach using both cryoballoon sizes might overcome some of the limitations in persistent AF. Prospective data and randomized studies are required. This article outlines the current status of cryoballoon technology in AF ablation.