Background: Donation after circulatory death (DCD) donors > 55 years are usually not considered suitable for liver transplantation (LT). At our institute, age is not an absolute exclusion criterion to refuse DCD liver grafts. We retrospectively compared the transplant outcome of patients receiving older DCD liver grafts to the younger ones.

Methods: 70 DCD liver transplants have been performed from 2003 to 2012, which includes 32 liver grafts from younger donors <55y (group A), 20 between 56 and 69 years (group B), and 18 from older donors ≥70 years (group C). The three groups were compared in terms of donor and recipient demographics, procurement and transplantation conditions, peak laboratory values during the first post-transplant week and results at one and three years. Results are expressed as median IQR.

Results: No difference other than age in donor and recipient characteristics as well as procurement conditions was noted between both groups. Median donor age of the group A was 44 (38-45) years, in group B 62 (60-64) years and 73 (71-75) in group C. Median primary warm ischemia time (WIT) were 20 (17-22), 21 (19-25) and 19 (16-23) min, respectively (NS). Median cold ischemia time (CIT) was 236 (229-294), 245 (227-290) and 210 (195-277) min, respectively (NS). Peak AST (UI/ml) was 1162 (1072-3971), 1416 (1006-2752), and 1067 (902-4037), respectively (NS). There was no primary nonfunction and one patient needed retransplantation for artery thrombosis. Biliary complications occurred similarly in both groups, without graft loss secondary to ischemic cholangiopathy. Graft and patient survivals were not different at one and three years.

Conclusion: This study shows comparable results between DCD liver transplants from younger and older donors. Therefore donor age >55 years should not be a contraindication to DCD liver transplantation if other donor risk factors (such as WIT, CIT) are minimized.