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IN BRIEF

TRANSPLANTATION

Survival benefit of solid-organ transplants quantified

Kidney transplantation saved 1,372,969 life-years in the USA over a 25-year study period, with 4.4 life-years saved per transplant recipient, according to new findings published in *JAMA Surgery*. The retrospective study, which reviewed the records of 1,112,835 patients who either underwent transplantation or were placed on the transplant waiting list found that in the USA, 2,270,859 life-years have been saved to date by solid-organ transplantation.

Original article Rana, A. *et al.* Survival benefit of solid-organ transplant in the United States. *JAMA Surg.* doi:10.1001/jamasurg.2014.2038

CHRONIC KIDNEY DISEASE

A salt-induced reno-cerebral renin-angiotensin axis

New findings suggest that the renal and cerebral renin-angiotensin axes interact via a salt-induced reno-cerebral reflex that induces renal fibrosis and chronic kidney disease progression independent of blood pressure. Cao *et al.* found that administration of a high-salt diet to 5/6 nephrectomized rats activated the renal and cerebral renin-angiotensin axes and induced renal fibrosis. Normalization of blood pressure using hydralazine did not affect fibrosis, but fibrosis was attenuated by intracerebroventricular administration of tempol, losartan or clonidine.

Original article Cao, W. *et al.* A salt-induced reno-cerebral reflex activates renin-angiotensin systems and promotes CKD progression. *J. Am. Soc. Nephrol.* doi:10.1681/ASN.2014050518

POLYCYSTIC KIDNEY DISEASE

Role for GSK3 β in polycystic kidney disease pathogenesis

Glycogen synthase kinase-3 β (GSK3 β) has a key functional role in the pathogenesis of polycystic kidney disease (PKD) and may represent a novel therapeutic target to prevent PKD progression, say researchers. Tao and colleagues found that levels and activity of the cell proliferation regulator were upregulated in the kidneys of mice and humans with PKD. Renal collecting duct-specific knockout of GSK3 β or pharmacological inhibition of GSK3 slowed PKD progression in mice. This benefit was associated with reductions in cAMP production, cell proliferation and cyst expansion.

Original article Tao, S. *et al.* Glycogen synthase kinase-3 β promotes cyst expansion in polycystic kidney disease. *Kidney Int.* doi:10.1038/ki.2014.427

CARDIORENAL SYNDROME

Drp1—a regulator of mitochondrial dynamics in cardiorenal syndrome

New findings indicate a role for mitochondrial dynamics in the pathogenesis of cardiorenal syndrome. Sumida *et al.* found evidence of mitochondrial fragmentation in the hearts of mice 24 h after renal ischaemia-reperfusion injury (IRI). After 72 h, mice had cardiomyocyte apoptosis and cardiac dysfunction. Levels of Drp1, a regulator of mitochondrial fission, were upregulated in the mitochondrial fraction of the heart and administration of a Drp1 inhibitor before IRI decreased mitochondrial fragmentation and ameliorated cardiac dysfunction.

Original article Sumida, M. *et al.* Regulation of mitochondrial dynamics by dynamin-related protein-1 in acute cardiorenal syndrome. *J. Am. Soc. Nephrol.* doi:10.1681/ASN.2014080750