cancer observed in previous studies might be explained by the effects of high insulin concentrations in the pancreas.

Jim Casey

Original article Stolzenberg-Solomon RZ *et al.* (2005) Insulin, glucose, insulin resistance, and pancreatic cancer in male smokers. *JAMA* 294: 2872–2878

Are renoprotection guidelines followed in elderly patients with diabetes?

US guidelines recommend that diabetic patients with nephropathy, hypertension, or both, use angiotension-converting-enzyme (ACE) inhibitors or angiotension-II receptor blockers (ARBs) to help slow progression of chronic kidney disease. Winkelmayer *et al.* used Medicare data to explore application of these guidelines to treatment of elderly diabetic patients (≥ 65 years) who were eligible to receive comprehensive drug treatment from the state of Pennsylvania in 2002. Patients with end-stage renal disease were excluded from the analysis.

The primary outcome was the filling of a prescription for either an ARB or an ACE inhibitor during January–March 2003. Of the 30,750 eligible diabetic patients (mean age 78.4 ± 6.4 years, 81% female), 21,138 had received a diagnosis of hypertension, nephropathy, or both. Although these patients were eligible for comprehensive drug treatment with minimal copayments, only 50.7% of diabetic patients with hypertension and/or proteinuria filled a prescription for an ACE inhibitor or ARB during the 3-month period. Older patients (75–84 years and ≥ 85 years) were significantly less likely to fill a prescription for the drugs than patients aged 65–74 years ($P=0.01$ and $P<0.001$, respectively). Patients with proteinuria but not hypertension were less likely to fill a prescription for the drugs than patients with hypertension only ($P=0.03$).

The authors conclude that renoprotection guidelines were not being followed in the elderly diabetic patients they studied, but acknowledge that the study did not assess whether this was because drugs were not prescribed by physicians or because prescriptions were not filled by patients.

Rebecca Ireland

Original article Winkelmayer WC *et al.* (2005) Underuse of ACE inhibitors and angiotensin II receptor blockers in elderly patients with diabetes. *Am J Kidney Dis* 46: 1080–1087

Cortisol levels can predict future cognitive decline in older individuals

Two prospective longitudinal studies recently reported results indicating that levels of cortisol in cognitively intact older people can predict their possible future cognitive decline. Previous studies have implicated elevated circulating cortisol levels in the pathogenesis of impaired cognition.

In a study by Karlamangla and colleagues, researchers measured the resting overnight urinary cortisol levels of 538 individuals (55% female, 45% male) aged 70–79 years with high cognitive function. Neuropsychological testing was used to assess their baseline cognitive function, and follow-up testing was carried out 3 and 7 years later to assess any changes. Cortisol measurements for participants were divided into quartiles for analysis.

Those in the upper three quartiles were found to be at higher risk of incident cognitive impairment than those in the lowest quartile (16% vs 9%), with similar risks for men and women. Adjustment for potential confounders, such as age at baseline, did not greatly affect the association.

In a separate study, Li *et al.* collected salivary cortisol samples from 79 cognitively intact participants aged 63 years or over. Samples were taken at 08:00 h, 15:00 h and 23:00 h, and the procedure was repeated annually for 3 years. Neuropsychological tests were carried out 2–3 days after collection of samples. For the 46 participants (52% female, 48% male) who completed the study, a higher baseline cortisol concentration at 23:00 h predicted a decline in memory as measured by delayed paragraph recall performance.

In the effort to develop strategies for halting cognitive decline in older adults, it is suggested that further research should be undertaken to develop methods of attenuating the detrimental effects of higher cortisol levels in this population.

Christine Kyme

Original articles Karlamangla AS *et al.* (2005) Urinary cortisol excretion as a predictor of incident cognitive impairment. *Neurobiol Aging* 26 (Suppl): S80–S84
Li G *et al.* (2005) Salivary cortisol and memory function in human aging. *Neurobiol Aging* [doi: 10.1016/j.neurobiolaging.2005.09.031]