The aim of the European Renal Nutrition Working Group is to conduct research on the impacts of lifestyle, diet, nutrient homeostasis and protein-energy wasting (PEW) management on chronic kidney disease (CKD) outcomes. European research in this field is already of high quality, but hampered by reduced funding, small patient cohorts and scientific isolation. ERN aims to forge strong collaborative links at a multinational European level in order to deepen our understanding of nutrition and CKD complications. Apart from initiating scientific projects, the Working Group organizes regular CME courses.

The global population is aging rapidly. In response, the World Health Organization (WHO) has launched an innovative project on aging and health to “ensure that older people in all countries can experience both long and healthy life” [1]. A healthy life is a life with a preserved ability to function in old age rather than a life in the absence of disease. Hence, according to WHO, “healthy aging is the process of developing and maintaining the functional ability that enables well-being in older age”. The task now is to move from the prevalent aim of adding years to life toward the wish to add “health” to years through a holistic approach that addresses health problems and functional capacity to provide a good quality of life in older people. The WHO Guidelines, Integrated care for older people (ICOPE) should be available in May 2016.

In elderly patients with advanced renal disease, the start of dialysis has a dramatic impact on their functional status [2]. The degree of independence in several activities of daily living (eating, dressing, toileting, walking, standing, changing position in the bed, ...) declines by more than 30% after 3 months of dialysis. At this time, 39% of patients maintain their functional capacity, but at 12 months only 13% maintain their predialysis functional status. On the whole, the frequency of maintenance of functional status is very low after the start of dialysis. The trajectory of functional capacity decline in renal disease patients starts around three months before dialysis inception, stabilizes in the subsequent one to four months and then continues to decline. Hence dialysis, while improving uremia and possibly prolonging the life of the older patient with advanced chronic kidney disease (CKD), cannot restore healthy functional status that is preserved in only one out of eight patients. Functional impairment after initiation of dialysis is more pronounced in the oldest and hospitalized patients. The magnitude of functional decline is, however, independent of age, gender, race and also of its trajectory prior to dialysis. The reason why functional capacity declines in dialysis is not clear and whether dialysis per se has a causative role also remains ill defined.

Generic health-related quality of life (HRQOL) in dialysis patients is reduced compared to the normal population all over the world. Some differences among subscales of HRQOL in dialysis emerge in different continents: US patients have highest scores for mental health domains, while Japanese patients have better physical functioning but also a greater burden of kidney disease. In older people, HRQOL is similar among hemo- or peritoneal dialysis patients, but residual renal function seems to be associated with a better HRQOL in hemodialysis.

Specifically, ESRD affects physical functioning, and these domains are strictly related to common nutritional markers (albumin, creatinine, body mass index [BMI], energy intake). In contrast, traditional basic dialysis indicators (PTH / calcium / phosphate, dialysis dose, inflammation) are not related to these domains. Interestingly, low HRQOL is associated not only with low serum albumin and creatinine, but also with higher body fat (a surrogate marker of nutritional reserve). This observation is puzzling since body fat, while being protective (survival advantage of high BMI in dialysis or obesity paradox), is also associated with a perceived lower quality of life that is related to worse outcomes. Nutritional markers in dialysis are linked to HRQOL even among well-nourished patients. Hence, nutrition may have a central role in the HRQOL in dialysis patients. This assumption supports further interest in intensive nutritional care in dialysis. Nutritional interventions could improve both nutrition and HRQOL in dialysis, but intervention data are very scarce. Evidence available to date suggests that nutritional supplementation during dialysis does not have any effect on short-term surrogates of HRQOL.

Large scale, worldwide, observational studies indicate that HRQOL is strongly related to dialysis patients’ outcomes. Lower scores for mental and kidney disease domains, but mostly for the physical domains of HRQOL, are associated with higher risk of either hospitalization or death, irrespective of demograph-
Elderly patients, however, deserve special consideration. Indeed, older patients with advanced kidney disease and multiple comorbidities, who decide not to start dialysis, have reduced survival but maintain their HRQOL. A critical question therefore arises: which wins the challenge in elderly dialysis patients: length or quality of life?

Across decades, the quality of life of patients on dialysis based on traditional indicators (anemia, dialysis dose, weight, PTH/phosphate, etc.) has remained mainly unchanged though manifesting some clinical improvements. A new quality model to improve the quality of life in dialysis people has been suggested [3]. The model incorporates the basic indicators into more complex, intermediate outcomes (fluid, diabetes, medication and mental status management, etc.). This approach would move from biochemical-centered to patient-centered care. For CKD patients, length of life is important but what matters most is improving the quality of their lives. Patients are willing to sacrifice life expectancy to reduce the hospital visits and other restrictions related to treatment and also to gain opportunities to travel or to have a more active life. Improving the intermediate outcomes by sharing the aim with the patient will improve the major outcomes (survival, hospitalization) and their overall quality of life. There is as yet no specific or unique formula to accomplish such patient-focused care in advanced renal disease. Different types of care may be needed for different types of patients and also to meet their different preferences.

Most dialysis patients are sedentary, especially older dialysis patients. This fact is confirmed by many studies that evaluate physical activity using questionnaires or pedometers. This inactivity is associated with increased mortality; in contrast, the benefits of physical activity in terms of morbidity and mortality are numerous in this population.

Recommendations exist for older dialysis patients: those set out for the general elderly adult population. However, few centers are implementing exercise training programs in dialysis patients. There are many reasons, including lack of knowledge and time of the medical staff, and the incorrect belief that older dialysis patients are not able or would refuse to increase their physical activity.

A more active lifestyle for older dialysis patients

Implement exercise programs

Initial assessment is essential, using simple means such as measurement of gait speed or the Timed Up and Go test, and medical examination. Different types of exercise can be proposed, adapted to the physical capacity of the patients. Ideally, aerobic exercise and resistance exercise should be combined, and be suggested, even if their intensity is very low because of the patient’s physical and functional limitations. It is important to note that no serious adverse events have been reported in the different programs and their feasibility has been demonstrated even in older dialysis patients.

Cycling during each dialysis session is an easy program to implement in the dialysis unit, with good adherence by the patient, using the time that contributes to deconditioning, and the presence of medical staff to provide the confidence and encouragement to continue. The intensity and duration of the exercise can be increased gradually. Resistance exercise using elastic bands can also be proposed during dialysis, as well as exercise on the days without dialysis with a coach or physiotherapist, alone or with other patients.

The fight against sedentary lifestyle among dialysis patients should be a goal of health care teams. There is no reason to regard age as a barrier; on the contrary, older patients could benefit from a physical activity program by an improvement of quality of life and physical functioning, leading to the preservation of their autonomy in daily activities.

References