

SOLUTIONS

FOR THE CANADIAN INSURANCE INDUSTRY

KIDNEY FUNCTION SCREENING: An Important Daily Task for the Underwriter

The kidneys are complex and versatile organs performing many functions including excretion of waste, regulation of the composition and volume of body fluids, regulation of electrolytes and acid-base balance, regulation of blood pressure, etc.

Chronic diseases of the kidneys are an emerging concern caused mainly by diabetes, hypertension and numerous renal glomerular disorders. Because these diseases are typically slowly progressive and in early stages asymptomatic, undiagnosed chronic disease can be a significant cause for excess renal and cardiovascular mortality and morbidity.

By utilizing information from your insurance laboratory serum chemistry and urine reports, screening for kidney disease remains an important daily task for the underwriter. Attention to the following items will allow the underwriter to perform this function easily.

SERUM CHEMISTRY TESTS:

1. Urea
2. Creatinine
3. eGFR

URINE TESTS:

1. Micro-albumin/creatinine ratio
2. Protein/creatinine ratio
3. Microscopic urinalysis

UREA and CREATININE:

Urea (sometimes expressed as BUN, blood urea nitrogen) and creatinine are both waste products that are efficiently eliminated into the urine by healthy kidneys. When kidneys are malfunctioning, urea and creatinine are poorly excreted resulting in elevated urea and elevated serum creatinine levels (note that if an applicant with healthy kidneys is temporarily dehydrated, urea levels can be elevated but serum creatinine levels remain normal).

eGFR:

Estimated glomerular filtration rate (eGFR) is useful to the underwriter for applicants at higher risk of chronic kidney disease (diabetics, hypertensives) as well as those with known potentially insurable kidney disease. Calculating the eGFR enables the underwriter to detect early kidney disease when urea and serum creatinine levels are still within normal range. Using the eGFR calculator function in your underwriting manual, this value is readily attained. Normal or stable eGFR values can provide reassuring information to the underwriter.

EMAIL

insurance@gamma-dynacare.com

PHONE

416.347.6279

WEBSITE

www.gamma-dynacare.com

T: GTCTCTTACC CGGT GTTG ACCAAAAGCT
C: TCGCTACTGC CTGCAACAA AACTAAATC
A: CTACACAAATA CATAATCACT GACCTGGTA

URINE MICROALBUMIN/CREATININE RATIO and URINE PROTEIN/CREATININE RATIO:

Urine normally contains small amounts of protein including albumin. Up to 150 mg. of protein per day can be found in normal urine of which 30 mg. is albumin. Larger amounts of protein and albumin can be temporarily detected in urine following vigorous exercise but persistently elevated levels on repeat specimens is indicative of kidney disease.

Ideally urine protein excretion is measured by 24 hour urine collection, but this would not be convenient (nor popular) in the insurance setting. A reliable substitute for measuring urine protein excretion is to perform simple calculations using measured concentrations of urine creatinine, urine microalbumin and urine protein from a single specimen.

Remember that creatinine is a waste product that is expected to be found in urine. The concentration of urine creatinine is merely an indicator of either dilute urine (low urine creatinine concentration) or concentrated urine (high urine creatinine concentration) and NOT an indicator of kidney disease. However, comparing the concentration of urine microalbumin to the concentration of urine creatinine (the microalbumin/creatinine ratio) is the measurement used to screen for early kidney disease. If the microalbumin/creatinine ratio is elevated on repeat specimens, kidney disease should be suspected. Similarly the urine protein concentration and urine creatinine concentration are compared using the protein/creatinine ratio. If the ratio is elevated on repeat specimens, kidney disease should be suspected.

MICROSCOPIC URINALYSIS:

A microscopic examination of urine looking for red blood cells (RBC's), white blood cells (WBC's) and cell casts provides additional information of urinary tract health. RBC's in the urine can be due to urinary tract cancer, stones, infection, trauma or nephropathy or simply a sign of "contamination" from normal uterine bleeding (in females). WBC's are associated with uro-genital infection. Granular casts are associated with nephropathy whereas hyaline casts are typically associated with vigorous exercise.

By targeting these screening serum chemistry and urine tests, the underwriter can quickly and accurately assess the many vital functions performed by the applicant's kidneys.

Gamma-Dynacare Medical Laboratories Acquires MedAxio™ Insurance Medical Services

Gamma-Dynacare Medical Laboratories has acquired MedAxio™ Insurance Medical Services, formerly Medisys Insurance Medical Services, a leader in providing medical information collection services to the Canadian life insurance industry.

MedAxio™ provides insurance paramedical examinations and telephone interviewing services across Canada with its head office in Toronto, Ontario, and regional offices in Montreal, Quebec and Richmond, British Columbia. MedAxio™ has more than 100 employees and utilizes over 1,000 mobile health care professionals in urban, rural and remote locations across Canada. This team performs approximately 250,000 examinations each year on behalf of a large number of life insurance companies.

"We are very excited about the acquisition of MedAxio™, as it emphasizes our ongoing commitment to being a leading provider of insurance medical services to Canadian life insurers," said Naseem Somani, President and Chief Executive Officer, Gamma-Dynacare Medical Laboratories. "This acquisition will allow for a greater integration of services for our insurance clients, which will improve specimen and data integrity, accelerate the overall service delivery process and ultimately increase customer satisfaction."

The acquisition is a strategic investment on the part of Gamma-Dynacare, recognizing the growing importance of mobile collection services to the organization's future growth in the insurance sector.

"As part of Gamma-Dynacare, MedAxio™ is poised to dramatically increase the value it provides to its insurance industry customers," explained Shari Gottschalk, President of MedAxio™. "It also allows us to diversify our services, opening up promising opportunities in new markets." Ms. Gottschalk will assume the newly created role at Gamma-Dynacare of General Manager of MedAxio™.