

IMPAIRED RISK REFERENCES

Issue 25

THE CASE

STUDY FOR

THIS MONTH

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Ken Larson has been a member of our impaired risk team for two years. Ken has been an underwriter for over 27 years in career, re-insurance, brokerage and substandard brokerage. Be sure to give Ken a call on your next tough case.



Underwriting Proteinuria

A 49 year-old man is looking for \$400,000 of term life insurance. There have been no medical problems, but the insurance exam reveals a urinalysis with a protein/creatinine ratio (P/C ratio) of .35 (normal is .2 and below). The proposed insured is preferred based on weight, blood pressure, family history, and lipids.

Proteinuria is the existence of protein in the urine. Urine was the first bodily fluid to be tested by the insurance industry as a measure of an applicant's health. It continues to be an important test to screen for risks to mortality. There is new evidence that the urinalysis could be a valuable tool in assessing risks other than kidney disease.

The normal function of the kidney is to be a filter. It filters impurities and fluid from the blood. When this filtering becomes inefficient it allows elements from the blood, such as proteins and/or cells, to pass in the urine along with the fluid and waste products.

This inefficiency of the kidney can be caused by injury to the functioning parts of the kidney, the glomeruli. Common diseases that can injure the kidney glomeruli are diabetes, hypertension, antibody reactions (such as lupus), chronic inflammation (glomerulonephritis), and others. When these diseases affect the kidney, the outcome can be kidney failure. When failure happens, dialysis and/or transplant may be necessary and death can occur. This risk obviously has a significant impact on mortality. The more protein in the urine, the worse the risk of kidney disease. An early warning sign of risk is the presence of microalbumin, a small amount of protein just beginning to appear in the urine. The blood tests for kidney function (BUN and creatinine) can be quite normal until kidney failure occurs. So proteinuria can be a sign of the presence of kidney disease that can progress to kidney failure.

There is another concern about protein in the urine

that has recently become more apparent by medical studies. Proteinuria can be evidence that there is a blood vessel disease. Hardening of the arteries that leads to heart attacks and strokes has been found to correlate with the presence of protein in the urine. It is shown that the risk of a cardiovascular event (such as heart attack) is 1.8 times greater than normal if there is proteinuria, and the probability of death from a disease other than kidney disease is twice as great.



The "gold standard" for measuring proteinuria is the 24-hour collection of urine, but this test is difficult, time consuming and inconvenient for insurance purposes. For the last 20 years it has been found that a more practical alternative has been the measurement of the P/C ratio; it correlates well with the protein measured by the 24-hour collection and may even be the new gold standard. Insurance testing labs regularly report results from this test to underwriters. It is more accurate than the dipstick method that gives the milligrams of protein in the urine.

The case study would be considered a *standard* risk because of the P/C ratio; this ratio is abnormal when it is above .2. The elevation increases the mortality risk due to the chances there may be future cardiovascular or renal mortality.

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