The law of investigative parsimony
Sanjay Kalra,1 Banshi Saboo2

Abstract
The Law of Investigative Parsimony, states: Minimal investigations should be employed for screening, diagnosis, monitoring and follow up of disease, provided this does not adversely affect patient well-being. This is based on the word 'parsimony', which means "the quality of being careful with money or resources", or "economy in the use of means to an end". The law of investigative parsimony is an extension of the laws of diagnostic and therapeutic parsimony, and is reflected in modern guidelines as well as clinical practice.

Keywords: Albuminuria, Albumin creatinine ratio, Chronic kidney disease, Diabetes, glomerular function, Tubular function.

The Need for Parsimony
The rise in prevalence of diabetes is accompanied by an increase in the costs of diabetes care. The economic impact of diabetes is such that it threatens even the most evolved health care systems in the world. The financial load on individuals and families who have no access to health insurance or to government funded medical facilities can only be imagined. In such situations, it makes sense to revisit the concept of parsimony.

Language and Laws
Parsimony is an English word which means "the quality of being careful with money or resources", or "economy in the use of means to an end".1 The law of diagnostic parsimony,2 inspired by Ockham's razor,3 is an accepted part of medical pedagogy. Simply put, it suggests that if a single diagnostic label can explain multiple symptoms, signs and laboratory abnormalities, it should be encouraged.

The law of therapeutic parsimony extends this concept to the field of medical therapeutics as well. This law proposes that minimal therapeutic interventions should be used, in place of multiple ones, as long as this can achieve equivalent therapeutic outcomes.4

Law of Investigative Parsimony
We posit the extrapolation of the concept of parsimony to investigations as well. The Law of Investigative Parsimony, states: Minimal investigations should be employed for screening, diagnosis, monitoring and follow up of disease, provided this does not adversely affect patient well-being.4

 Parsimony in Guidelines
An example of codified investigative parsimony is found in the International Diabetes Federation guidelines for the management of diabetes.5 This document differentiates between recommended care, limited care and comprehensive care, allowing the diabetes care provider to practice investigative and therapeutic parsimony when required.

It must be noted that more investigations are not always better. The widespread occurrence of labomas and incidentalomas testifies to the damage that unnecessary tests can cause.6 In diabetes as well, there is lack of consensus regarding the optimal frequency of simple tools such as sell monitoring of blood glucose.7 Frequent pricking for SMBG is also associated with adverse events, ranging from loss of quality of life to infection. Therefore, investigative parsimony, if practiced well, may actually enhance health.

Examples From Clinical Practice
There is ample scope for rational investigative parsimony in diabetes care. Chronic kidney disease (CKD) for example, can be diagnosed and staged by assessing albuminuria and estimated glomerular filtration rate (eGFR).6,9 Both are necessary to have a health index, as they measure glomerular and tubular function separately. An index which may be able to quantify glomerulo — tubular function is albumin: creatinine ratio (ACR). While earlier reports suggest that ACR estimation is more expensive than micro albuminuria detection,10,11 recent studies highlight the utility of ACR measurement in staging CKD and in risk stratification.12,13

Summary
The Law of Investigative Parsimony reminds us to employ minimal investigations for screening, diagnosis, monitoring and follow up of disease, provided this does
not adversely affect patient well-being. Rational clinicians should follow this law in clinical practice.

References