cal test. Pilcher claims that in these cases the real function can only be estimated when you have in some way relieved your back pressure, as the kidney he says acts only as an osmotic membrane between the general circulation and the backed up urine.

Group 2. In second group I would like to consider the obstructed cases that improve under preliminary treatment, but to begin with have a low phthalein output. The destruction of the renal tissue in such cases is not permanent for the kidney cell will recover some of its excretory power when the back pressure is relieved by a permanent catheter, or regular catheterization, as preliminary operation under local or spinal anaesthesin or gas or oxygen. The phthalein test is here a most valuable check indicator of the progress in efficiency as well as indicating when a second operation may be performed with safety, and the nature of the operation. Speaking generally, an output of 30% would be quite safe. Cystoscopic examination also hereafter gives indispensible aid to the surgeon, as the pathological condition of either bladder or kidneys.

Group 3. Under group three let us consider cases which show a diminished renal function from reflex or toxic causes such as (1) stone in the ureter or kidney pelvis, (2) calculous pyonephrosis, (3) an acute septic infection. Stone in the ureter will often reflexly inhibit the functional output of the opposite kidney, while the affected side may be lessened from obstruction. In these cases a cystoscopis examination is imperative, for diagnostic purposes, to corroborate the radiographic findings as well as for the estimation of the separate renal function by ureteral catheterization. No surgeon is justified in attempting an operation on a kidney without knowing, if possible, the relative value, if any, of the opposite kidney. Many fatalities in renal operations have been due to a removal of the only kidney power the patient had. In these cases of reflex inhibition of phthalein, if the urine from the unaffected side is copious and free from pus cells, an operation can usually be safely done, even when the output is comparatively low. In unilateral calculous pyonephrosis the comparative estimation of each side is sometimes necessary but as a rule the phthalein output of the inaffected side is more important, for immediate results depend on the good kidney. If the calculous pyonephrosis is bilateral, the surgeon, even with the aid of the radiograph, cystoscopic and phthalein test will have ample difficulty in deciding on a line of action, but he must select the kidney for operation which will least endanger the patient's life. Reasonably, however, he must select some operation on the kidneys as the only hope of relieving a diminished function from an internal cause and often only a preliminary drainage can be done with a selected anaesthesia. Acute infections may occur, or be grafted on to a pre-existing condition, such as a cal-