OBJECTIVE: To evaluate the clinical, urodynamic, functional, radiological and metabolic results of the ileal (modified Hautmann) orthotopic neobladder over 10 years of experience. PATIENTS AND METHODS: Between January 1992 and March 2002, 124 men (mean age 62.4 years, range 44-76) with advanced bladder cancer had a radical cystoprostatectomy and urinary diversion via an ileal orthotopic neobladder (modified Hautmann). Only 40 cm of small bowel (detubularized ileum) was used to construct the reservoir, as a modification of the method described by Hautmann. All patients were followed periodically and their data recorded. RESULTS: While no patients died during surgery six died (mortality rate was 5%) in the first 30 days afterward (two of them from causes unrelated to the urinary diversion surgery). The early reoperation rate was 14%; there were early complications not requiring surgery in 40 (34%) and later reoperation rate was required in 20.6%. The mean (range) maximum neobladder capacity was 550 (310-720) mL, the maximum intravesical pressure at maximum capacity 26.4 (11-48) cmH2O, and the minimum and maximum flow rates 25.2 (16-64) and 17.5 (11-30) mL/s, respectively. Day- and night-time continence rates were 92% and 90% after 4 years. While there was no electrolyte imbalance, there was mild to moderate metabolic acidosis in 58% of patients. There was no urethral tumour recurrence in any patient. CONCLUSION: Detubularization of ileum to form a neobladder gives a more favourable low-pressure and high-capacity reservoir. Therefore, a shorter ileal segment can be used for orthotopic urinary diversion, to avoid various metabolic dysfunctions when using detubularized bowel, but the surgery is not as free of complications as the original technique.