**How to prioritize urological surgeries during epidemics: Lessons learned from the Toronto SARS outbreak in 2003**

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The current outbreak of COVID-19 was first described as a pneumonia of unknown origin which rapidly spread from the city of Wuhan to main land China and ultimately, throughout the world [1,2]. On March 11th the World Health Organization declared the COVID-19 a pandemic and urged countries to refine their planning, monitoring and readiness to act on their confirmed and suspected cases of the virus [3]. While Canada is still considered a low risk country, with currently 3555 patients confirmed with the disease [4], protocols are being rapidly established due to the fluidity of the situation in order to flatten the curve and contain the virus spread rate, which has already succeeded that of the SARS outbreak in 2003[5,6].

In the spring of 2003, Toronto experienced the largest SARS outbreak outside Asia with 257 cases and 43 deaths [5-8]. Under the emergency management act, all non-urgent hospital admissions were restricted, unfortunately compliance to this measure was not reinforced in an orderly fashion, based on priorities [7]. During that restriction period, the rate of elective surgery had a modest decreased of 15-22% during the early and late phases of the outbreak and rates of admissions for urgent surgery remained stable [5,7]. Based on the 2005 Toronto's influenza pandemic prediction model, this reduction in admission numbers represented an insufficient decrease unable to manage the surge capacity when compared to the forecasted rate of admissions [7]. This alerted the need for more efficacious public health policies on restriction of non-urgent clinical activities to increase flow capacity [8,9]. At the time of writing of this editorial, most hospitals across Canada have already significantly restricted scheduled (non-urgent) <u>elective</u> urological surgeries. Multiple lists of both cancer and non-cancer cases that should be initially cancelled have circulated on social media. For the benefit of practices across Canada we provide an example protocol to aid in eventual rescheduling in the face of the projected increase to our waiting lists.

The optimal management of elective surgery waiting lists is a multifaceted problem that occurs in different countries regardless of the presence of a universal health care system [10]. To cope with this situation, we suggest this grading system based on risk priority to reschedule elective surgeries and

manage standby periods (figure 1). Grading occurs from 1 to 4 where "priority 1" is the cluster of the most severe cases based on clinical presentation, presence of red flags and demographics. It is important to point out that classifying patients to a specific priority level is a dynamic and ongoing process where reclassification may be needed based on disease progression as well as, the surgeons clinical judgment. Furthermore, different practices and hospitals with specific foci of urological care may find these suggestions imperfect for their particular situation and regional role; however, we hope this protocol could serve as a starting point for justifying priority of case selection in the coming weeks to months.

Cancelling elective surgery is a crucial step in creating surge capacity to prioritize hospital resources during pandemics. Utilizing priority-based grading strategies to reschedule elective surgery and procedures is a crucial strategy to help mitigate the impact of the COVID 19 outbreak on hospital performance.
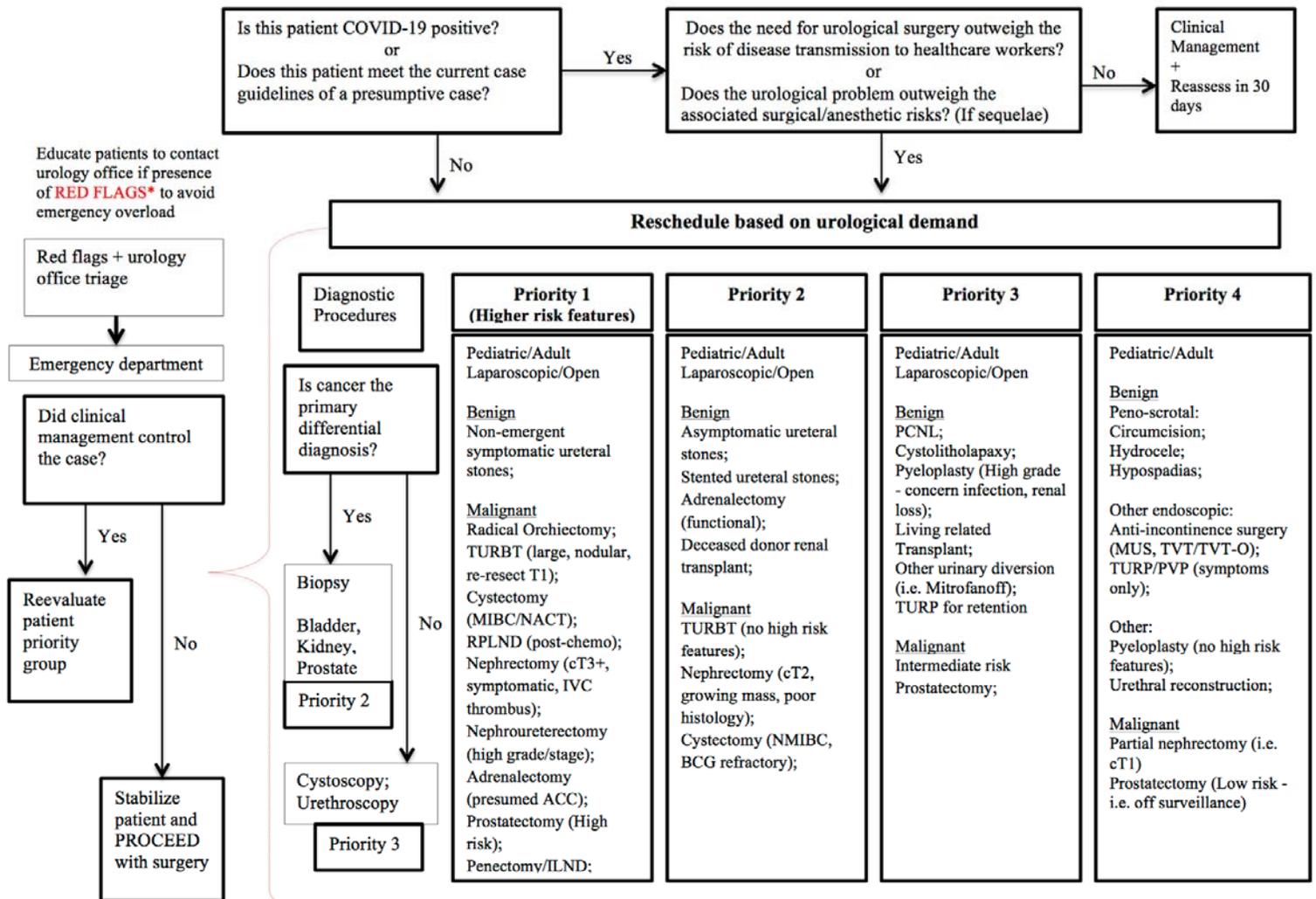
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**Figures and Tables**

*Fig. 1.* Decision-making algorithm for rescheduling urology elective surgeries post-COVID-19 outbreak.