



**Figure S1. Representative transitional cell carcinoma (TCC) samples stained by HE.** Representative samples stained by HE demonstrate the grading of transitional cell carcinoma (TCC) according to the tumor architecture, the cytologic and nuclear morphologies of the neoplastic cells. **G1** corresponds to a low grade (non-invasive) TCC; **G2** can be either low grade or high grade tumor (the latter is shown on this image). **G3** is equivalent to high grade TCCs (the demonstrated images are from invasive neoplasms except the left image for G1). Magnifications for all images: 250x. The differentiation levels of urothelial carcinomas were evaluated based on the guidelines (Ref 39-42).