

## A NEW VISUAL TOOL TO ESTIMATE FLOW PARAMETERS: ANALOGICAL UROFLOWMETRY (ANUF).

### Hypothesis / aims of study

To study the correspondence and correlation between a new visual tool (Analogical UroFlowmetry (ANUF)) and the UF values like the Q(max) when performed to assess male voiding symptoms.

### Study design, materials and methods

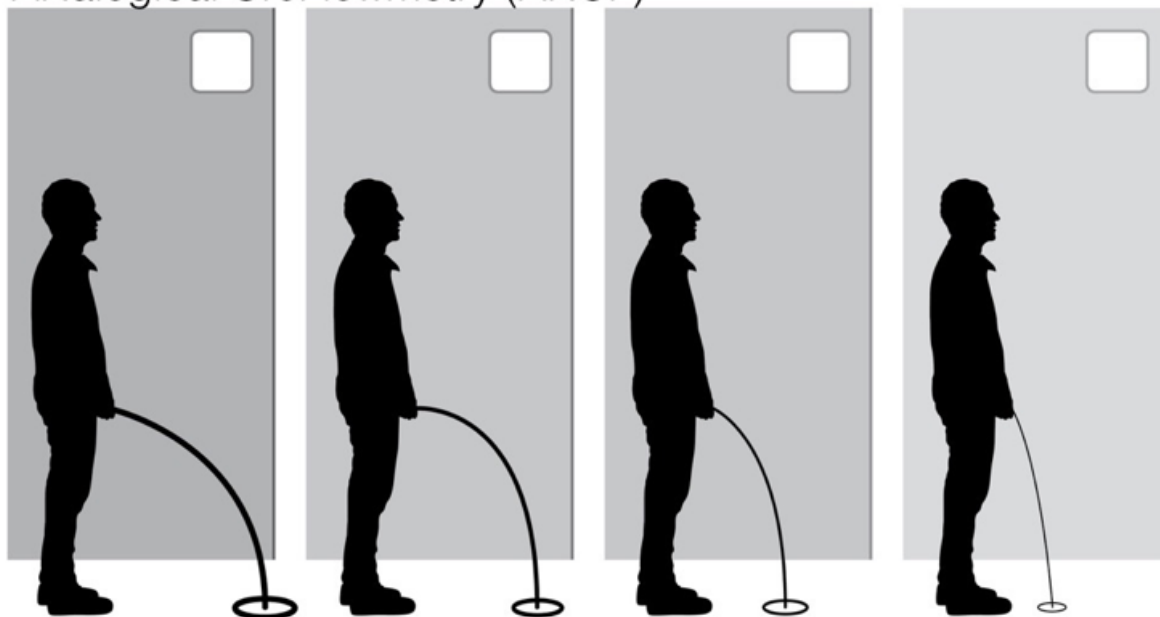
We configured an original pictogram (Figure 1) composed of four images (1, 2, 3 and 4). In the setting of a University Hospital based prospective study, 545 men were enrolled between 2014 and 2015. Variables collected were age, UF pattern, Q(max), average flow (Q(ave)), voided volume, postvoid residual urine volume and selected image. The Spearman's rank test, ANOVA and Tukey test, as well as the lineal regression model were used.

### Results

358 patients fulfilled the inclusion criteria. Mean age was 64.6 ±12 years. Mean value and SD for the Q(max) were 20.4±10.5 mL/s for Image1; 15.5±6.4 mL/s for Image2; 13.5±6.0 mL/s for Image3 and 10.4±5.4 mL/s for Image4. Statistically significant negative correlations were found between ANUF and Q(max) ( $r = -0.317$ ;  $p < 0.0001$ ), and ANUF and Q(ave) ( $r = -0.305$ ;  $p < 0.0001$ ). Q(max) mean values among images were statistically different when compared in pairs, except Image1 and Image2 ( $p = 0.153$ ). The confident intervals calculated through the lineal regression model for the Q(max) and each image were: Image1) 17.8, CI95%: [14.9-21.5] mL/s; Image2) 14.3, CI95%: [13.0-15.7] mL/s; Image3) 12.3, CI95%: [11.5-13.1] mL/s and Image4) 9.1, CI95%: [8.1-10.3] mL/s.

Figure 1. ANUF

### ANalogical UroFlowmetry (ANUF)



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### Interpretation of results

Our study results are valuable because its high volume of cases and because primary objective has been achieved, demonstrating a correspondence between Q(max) and the selected image, and a correlation between ANUF and the Q(max). As well, we have been capable to establish confident intervals to predict approximately the range of Q(max) of each patient depending on the selected image.

### Concluding message

According to our results, ANUF is a useful and inexpensive tool presenting a correlation with the Q(max) as well a correspondence of each image with a range of Q(max) and its mean value.

### Disclosures

**Funding:** NONE **Clinical Trial:** No **Subjects:** HUMAN **Ethics not Req'd:** no added intervention or maneuver was performed differently to the routine clinical practice. **Helsinki:** Yes **Informed Consent:** Yes