AMERICAN ASSOCIATION OF BIOANALYSTS
205 West Levee St. Brownsville, TX 78520
(281) 436-5357 - (800) 234-5315 - Fax (713) 781-5008

PARTICIPANT STATISTICS **URINE SEDIMENT** **FIRST QUADRIMESTER 2010**

Photo 1		Flagging
Clue Cell	33	*****
Epithelial Cell	103	
Epithelial Cell Cast	5	*****
Macrophage	1	*****
Renal Tubular Epi Cells	2	*****
Squamous epithelial cell	1090	
Transitonal Epit Cell	10	*****
Total Population	1245	

Photo 2		
Epithelial Cell	15	
Epithelial Cell Cast	3	*****
Renal Tubular Epi Cells	707	
Squamous epithelial cell	6	*****
Transitonal Epit Cell	359	
WBC Any form	53	*****
WBC Clumped	74	*****
White Blood Cell Cast	6	*****
Yeast - budding	3	*****
Total Population	1243	

Educational Challenge	
Artifact/Other	10
Broad Cellular Cast	7
Broad Noncellular Cast	28
Cast, Cellular	2
Cast, Noncellular	16
Cholesterol Crystal	5
Crystal, not specified	2
Epithelial Cell Cast	8
Granular Cast	5
Hyaline Cast	35
Pseudocast	2
Renal Tubular Epi Cell	10
Squamous Epithelial	4
Transitional Epit Cell	11
Uric Acid Crystal	4
Waxy Cast	1070
White Blood Cell Cast	2
Would Refer	11
Total Population	1239

The intended result for the educational Challenge was Waxy Cast.

Standard theory is that cellular, granular, and waxy casts represent different stages of degeneration of cells in a cast. The appearance that a cast takes in a urine sediment depends largely upon two factors; the length of time it remained trapped in the renal tubules prior to being shed into the urine, and where it forms in the tubules.

A cast recognizable as cellular, was likely shed shortly after it was formed, whereas a waxy cast was retained longer in the tubular system prior to being released . The waxy casts owe their name to their opaque wax like matrix. Waxy casts typically have square ends and have frequent notch like cracks perpendicular to the long axis. There appearance is related to long stationary periods due to a lack of urine flow through some nephrons. Waxy casts typically have no inclusions or are slightly granular. However, inclusions are occasionally seen. The key discriminating factor being that the inclusions are infrequent and usually not cellular in nature.