


# Urine Specimen of Helen Humphries

[score](#) [print all](#)

Helen's physical and chemical exam results are recorded in the requisition below. Please scroll down to complete this lesson being sure to answer all the test questions (then check answer) as you go through it. When you are done, download a copy of the report form, fill in the microscopic exam results and either hand it in (if you are on campus) or upload it (if you are online).

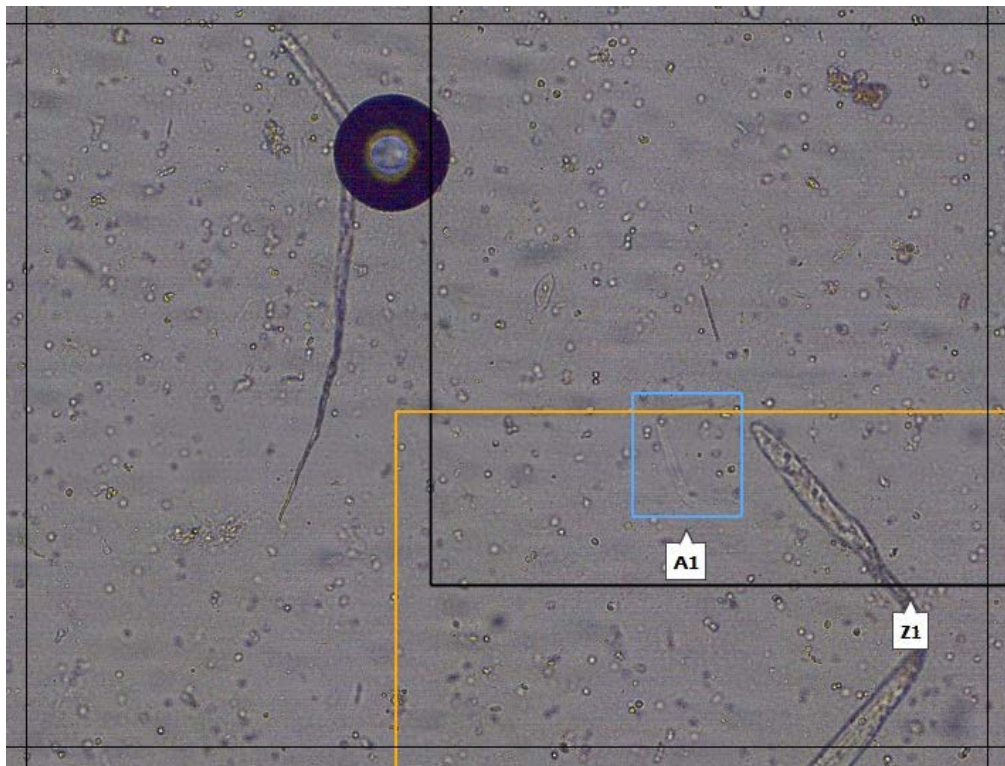
|  |  |  |  |                  |
|--|--|--|--|------------------|
| <b>Routine Urinalysis</b>                            |  |  |  |                  |
| Patient Name: Helen Humphries                        | ID Number: NA  |  |  |                  |
| Collected: 9/24/15 11:00 am                          | Received: 9/24/15 11:04 am                               |  |  |                  |
| <b>Macroscopic (Physical) Exam</b>                   |  |  |  |                  |
| Color Yellow   | Clarity Cloudy   | Specific Gravity by Refractometer  |  |                  |
| <b>Chemical Exam</b>                                 |  |  |  |                  |
| Glucose negative                                     | Bilirubin negative                                       | Ketones negative   | Specific Gravity 1.010                 | Blood negative   |
| pH 6.0   | Protein negative   | Urobilinogen 0.2   | Nitrite positive                       | Leukocytes large |
| Circle the abnormal dipstick results                 |  |  |  |                  |
| <b>Microscopic Exam</b>                              |  |  |  |                  |
| <b>Low Power Exam - Casts</b>                        |  |  |  |                  |
| Hyaline  | Granular   | Waxy   | Broad                                  |                  |
| RBC/Hemoglobin                                       | WBC  | Epithelial Cell  | Fatty                                  |                  |
| <b>High Power Exam</b>                               |  |  |  |                  |
| Squamous Epi<br>None <u>occ</u> small mod large TNTC | Transitional Epi<br>None <u>occ</u> small mod large TNTC | Renal Tubular Epi<br>None <u>occ</u> small mod large TNTC                          |  |                  |
| RBC  | WBC  | Mucus<br>Absent Present  | Bacteria<br><u>Occ</u> small mod large |                  |
| Sperm<br>Absent Present                              | Crystals   | Other  |  |                  |

[Click here to download a copy of this report form](#)

## Helen Humphries Low Power Examination (10x)

Observe the following 10 low power fields(numbered 1 - 10) to determine your low power microscopic results.

Field # 1



[Show/hide comprehension question...](#)

Value: 1

A1: Please identify the upside down L in the blue box.

- a. mucus
- b. squamous epithelial cell
- c. hyaline cast
- d. WBC cast
- e. artifact

Field #2:



[Show/hide comprehension question...](#)

Value: 1

A2: Identify the object running diagonally through the green circle

- a. mucus
- b. fatty cast
- c. hyaline cast
- d. transitional epi
- e. fiber artifact

Field #3



[Show/hide comprehension question...](#)

Value: 1

A4: A. Do you see any casts in the green square?

- a. yes
- b. no

[Show/hide comprehension question...](#)

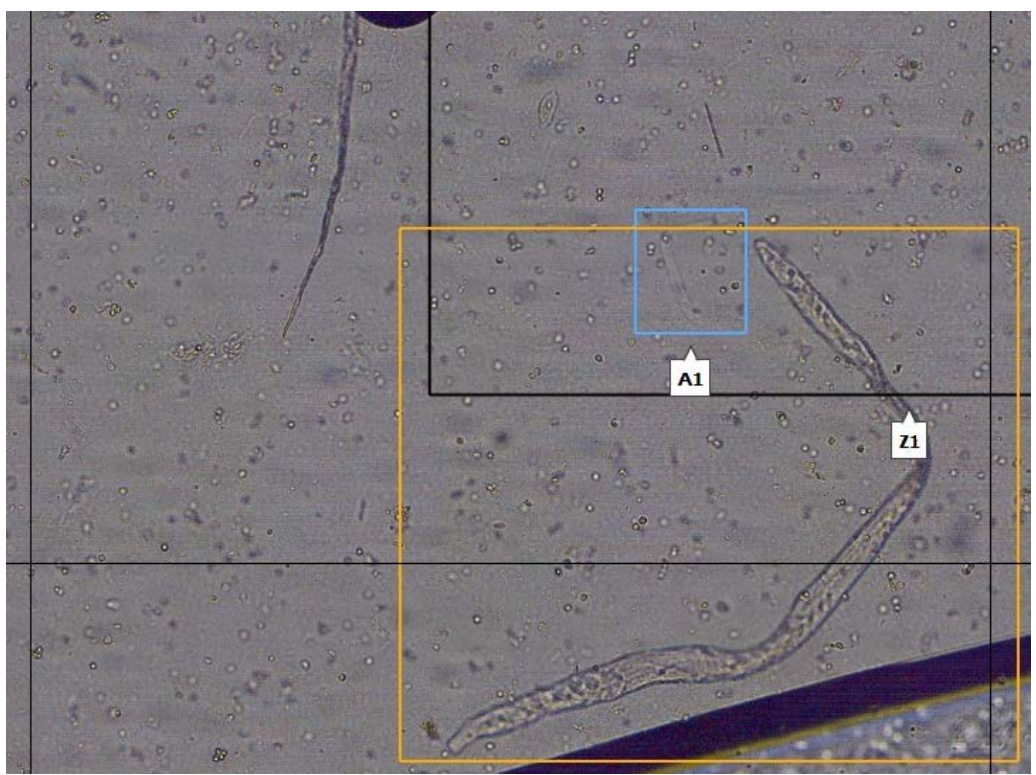
Value: 1

A4: B. How many do you see?

- a. 1
- b. 2
- c. 3
- d. 4
- e. more than 4



Field #4



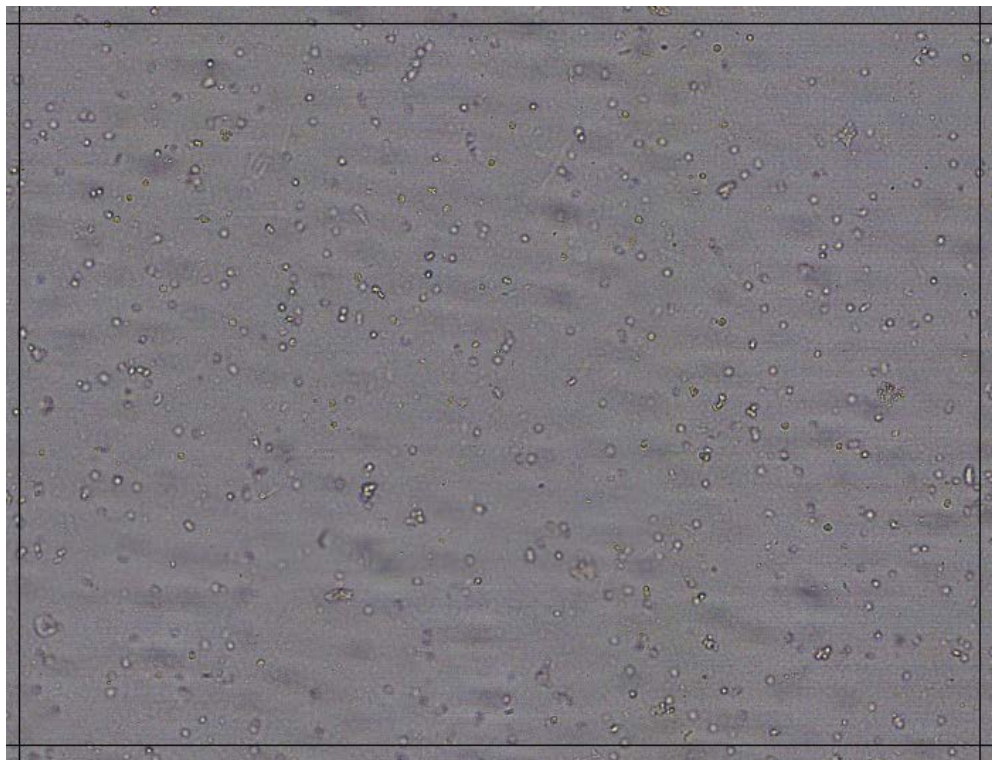
[Show/hide comprehension question...](#)

Value: 1

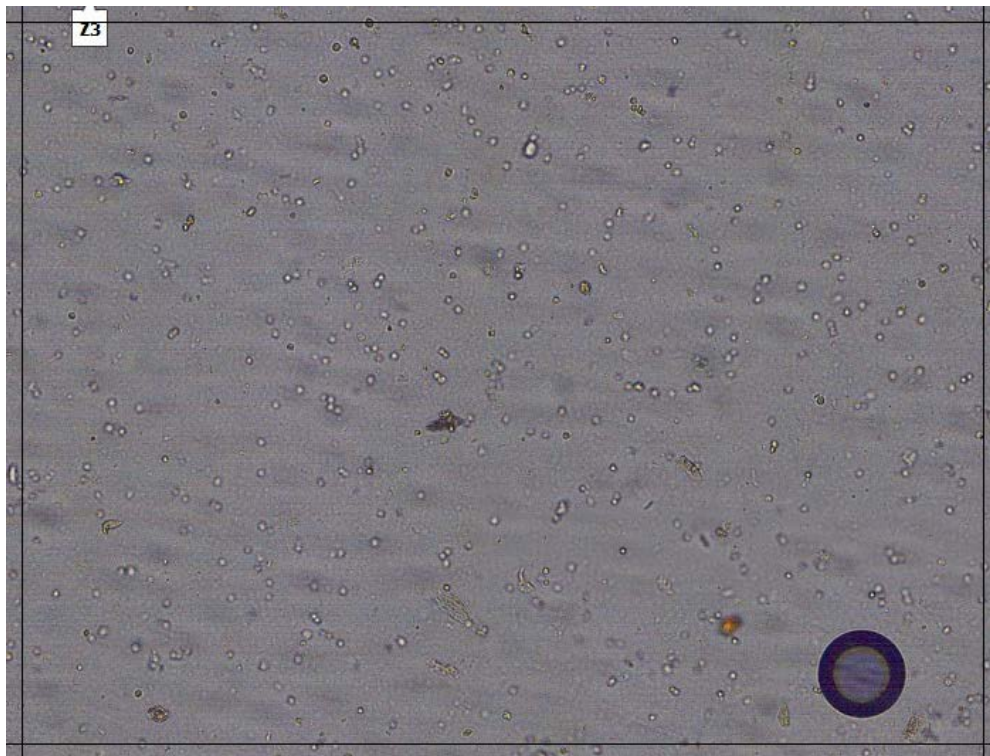
A5: What is the large item you see in the yellow box (I am not referring to the edge of the well at the bottom)?

- a. hyaline cast
- b. waxy cast
- c. granular cast
- d. broad cast
- e. artifact

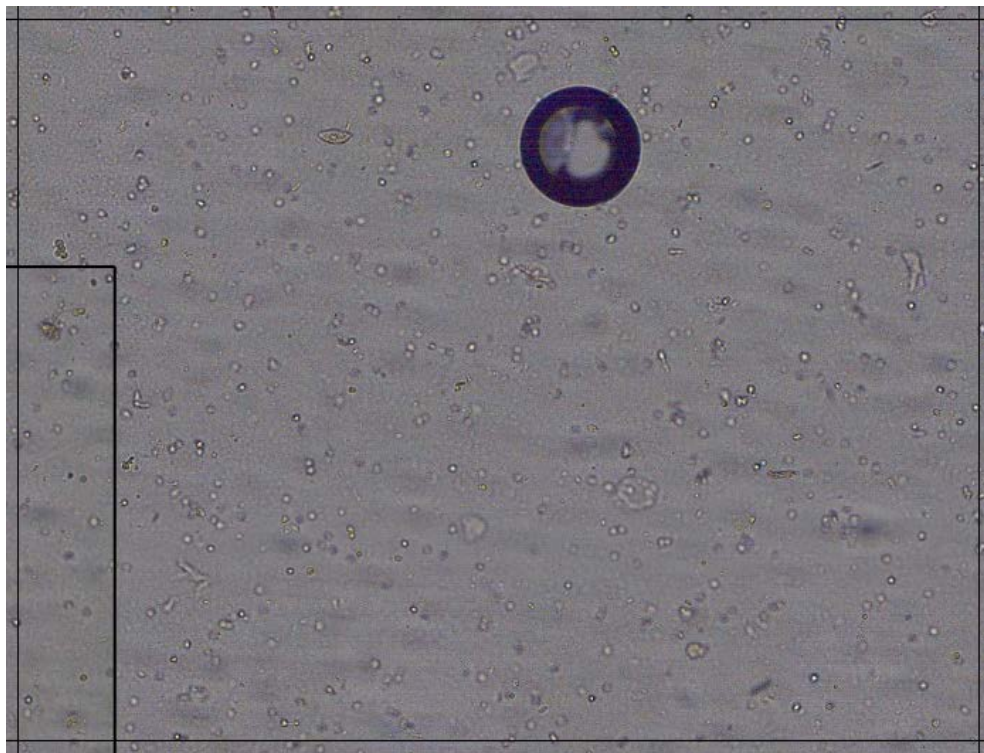
Field 5:



Field 6



Field 7

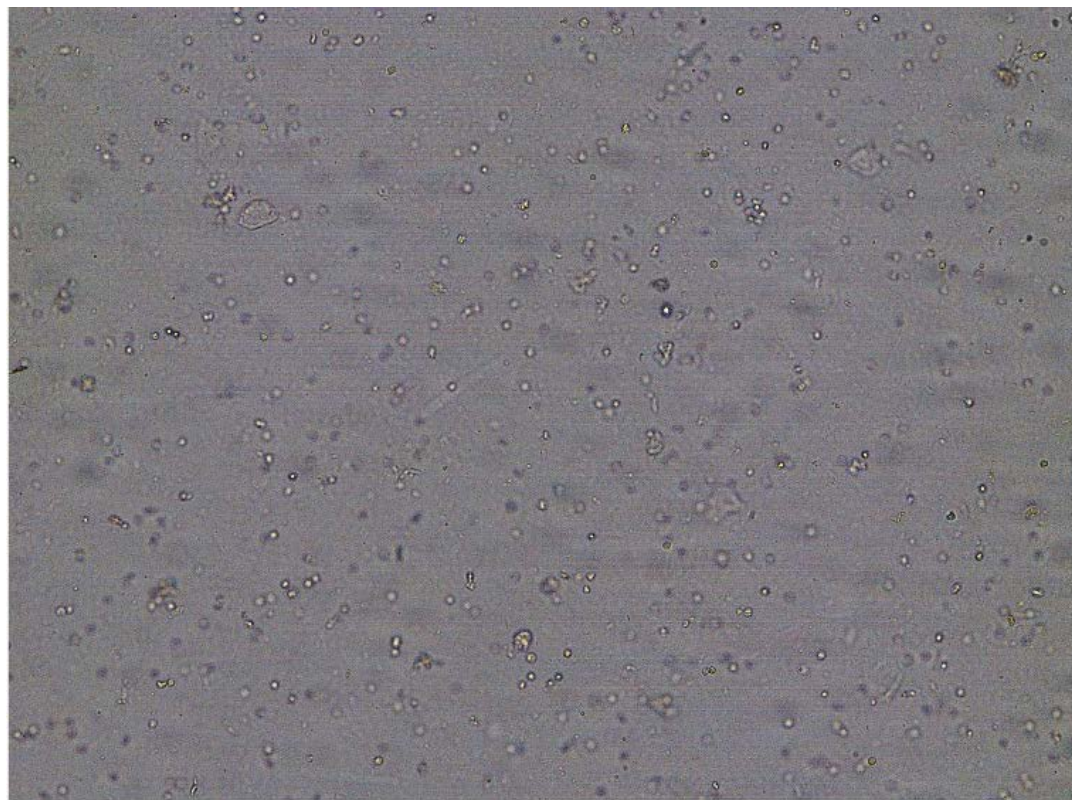


Field 8: (z-stack)

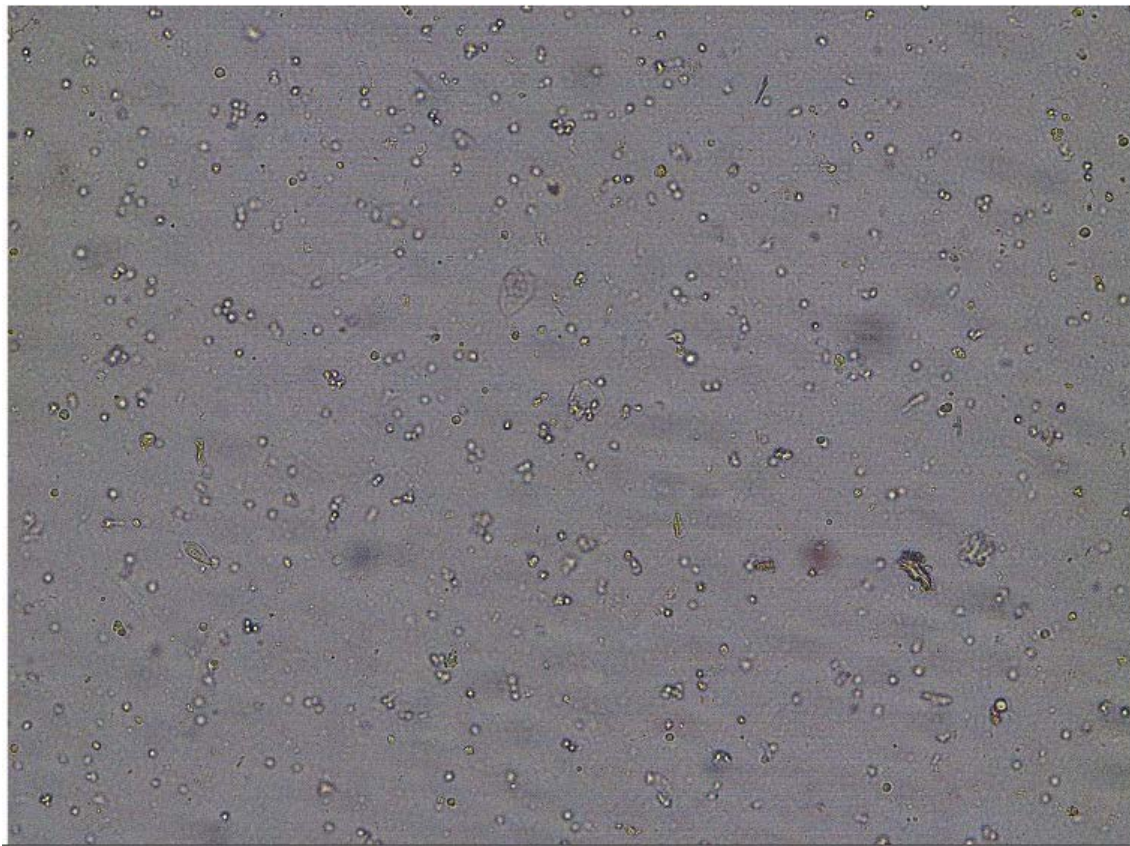




Field 9 10x Z2



Field 10 10x Z3 [Click Here to see the focusing video of this Z-stack](#)



Please complete the low power report and then move on to the high power images and questions.

[Show/hide comprehension question...](#)

Value: 1

A. Do you see any casts in this video? If so, how many?

- a. No, 0
- b. 1
- c. 2
- d. 3-4
- e. 5 or more

[Show/hide comprehension question...](#)

Value: 1

After viewing the 10 low power fields, what would you report for the number of casts seen in Helen Humphries' urine specimen?



- a. None seen
- b. 0-1
- c. 1-4
- d. 3-5
- e. 6-10
- f. 10-20
- g. greater than 20

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**Helen Humphries High Power Examination (40X)**

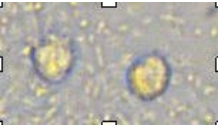
Identify each of the following selected images:

[Show/hide comprehension question...](#)

Value: 1

A1: What are the 2 cells shown below?

- a. 1 WBC and 1 RBC
- b. 2 renal tubular epithelial cells
- c. 2 RBC
- d. 2 WBC
- e. 2 starch granules



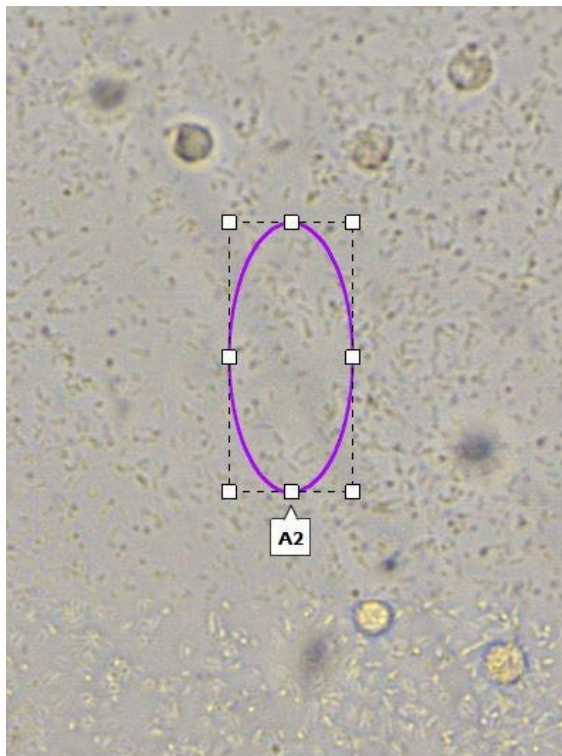
[Show/hide comprehension question...](#)

Value: 1

In the image below there is a faint line going from the bottom right of the image to the top left. Do you think you need to focus all the way out to see this image?

- a. yes
- b. no



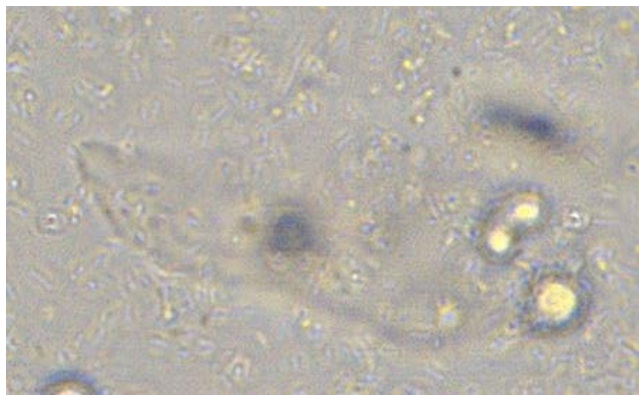


[Show/hide comprehension question...](#)

Value: 1

A3: In the image below, what would you identify this cell as even though it is blurry?

- a. renal tubular epi
- b. transitional epi
- c. squamous epi
- d. WBC
- e. Hyaline cast



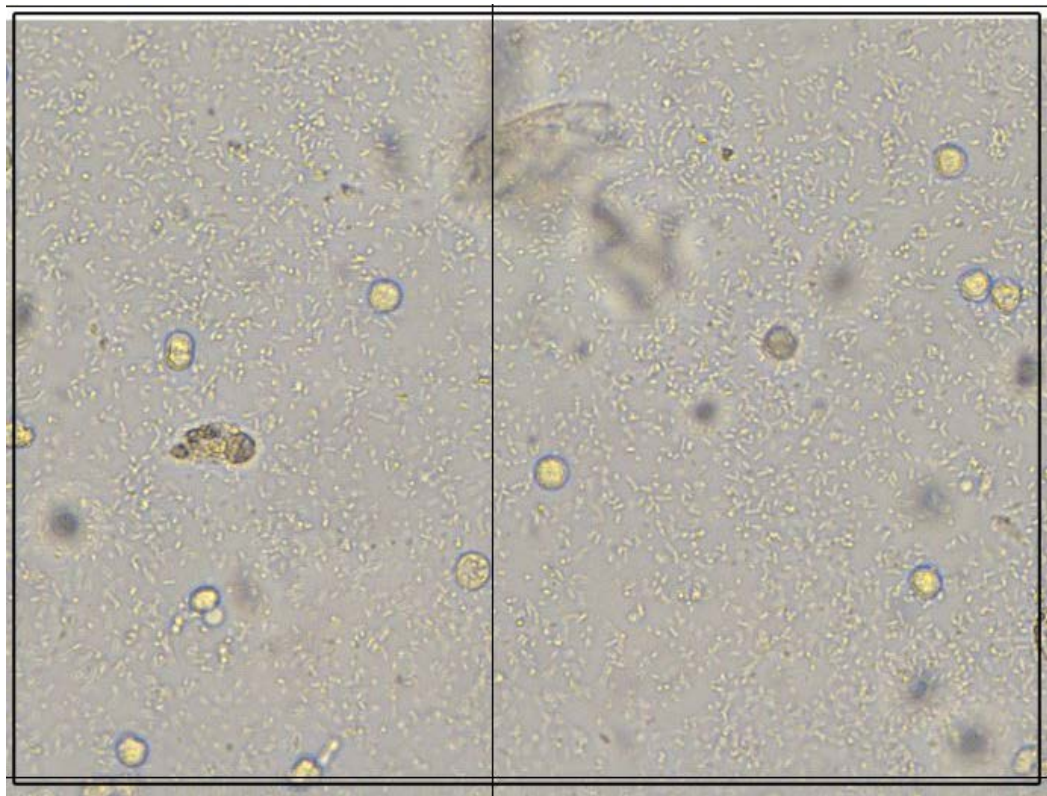
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## 10 High Power Fields

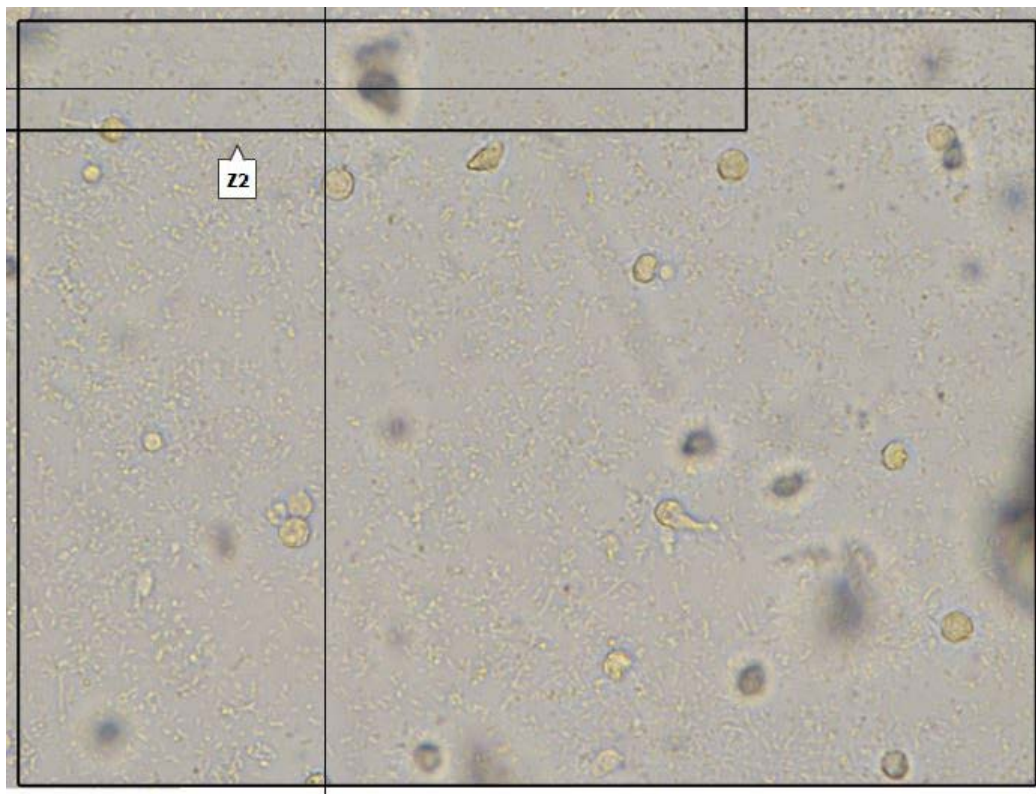
Carefully observe and count the items in each high power field to complete the lab report on Helen Humphries. Answer each question as it appears and check answer before you move on.

Field 1 Z3: [Click here to see the video of this Z-stack.](#)

**Please notice how the cells that are not in focus will come in focus as the fine adjustment knob is moved up and down. Make sure to count all cells even though they may be out of focus in some planes but in focus in others.**



Field 2 Z1 [Click here to focus up and down on this z-stack.](#)



[Show/hide comprehension question...](#)

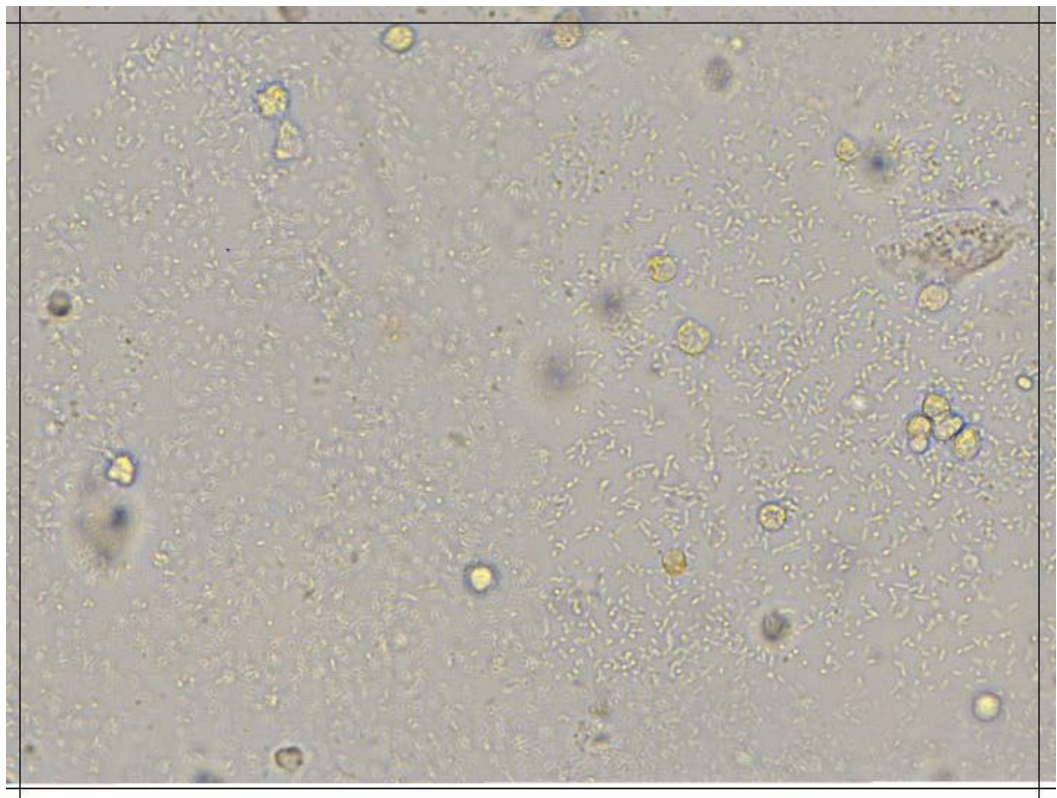
Value: 1

What term would you use to describe the amount of bacteria present on this field?

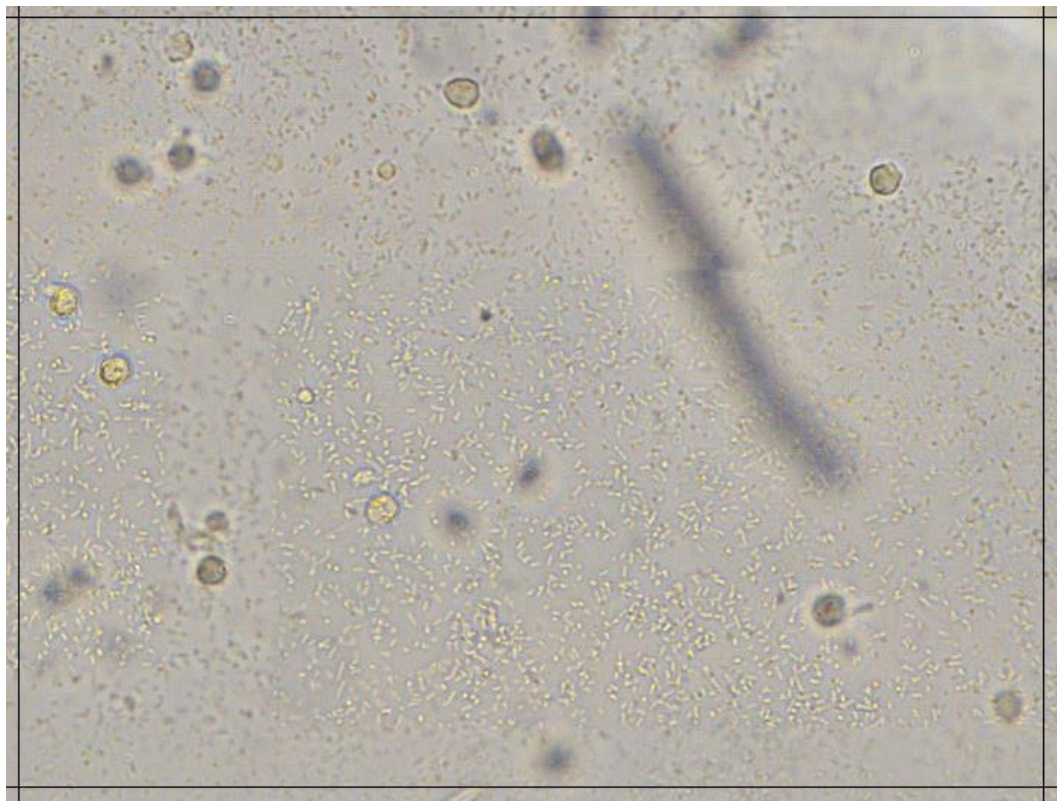
- a. none
- b. occasional
- c. small
- d. moderate
- e. large

Field 3:



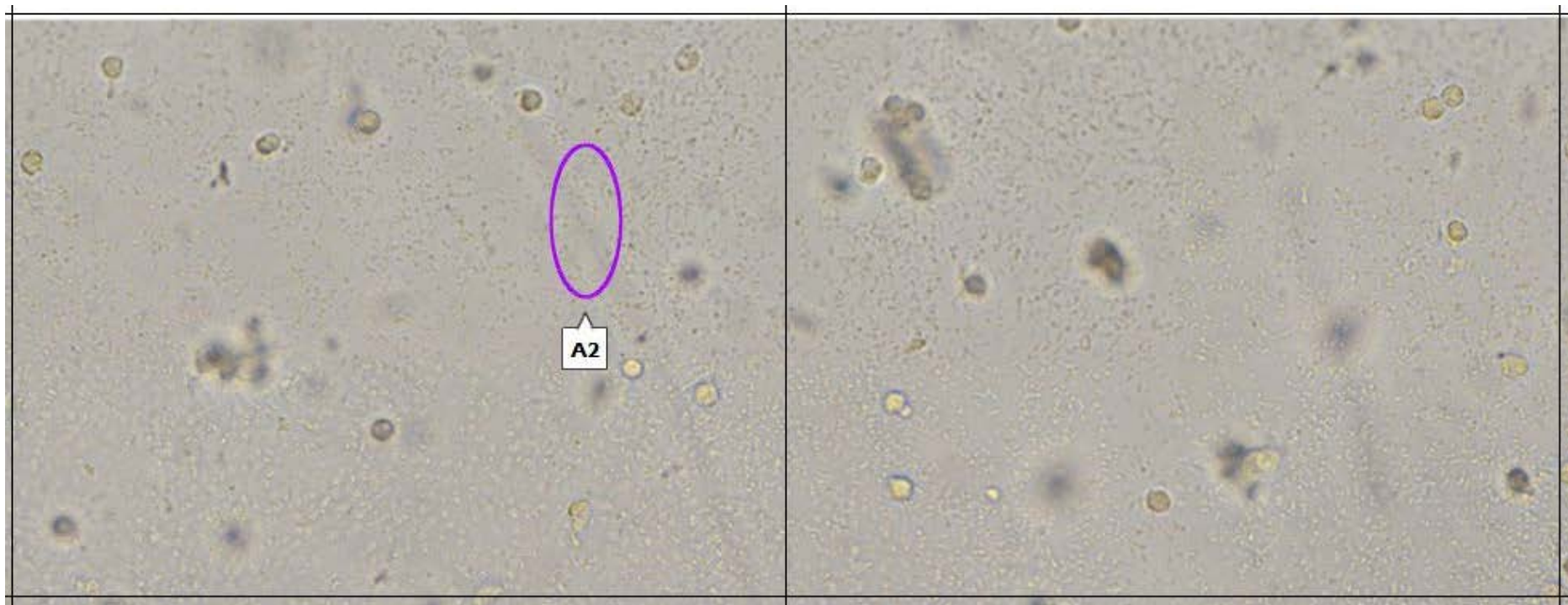


Field 4

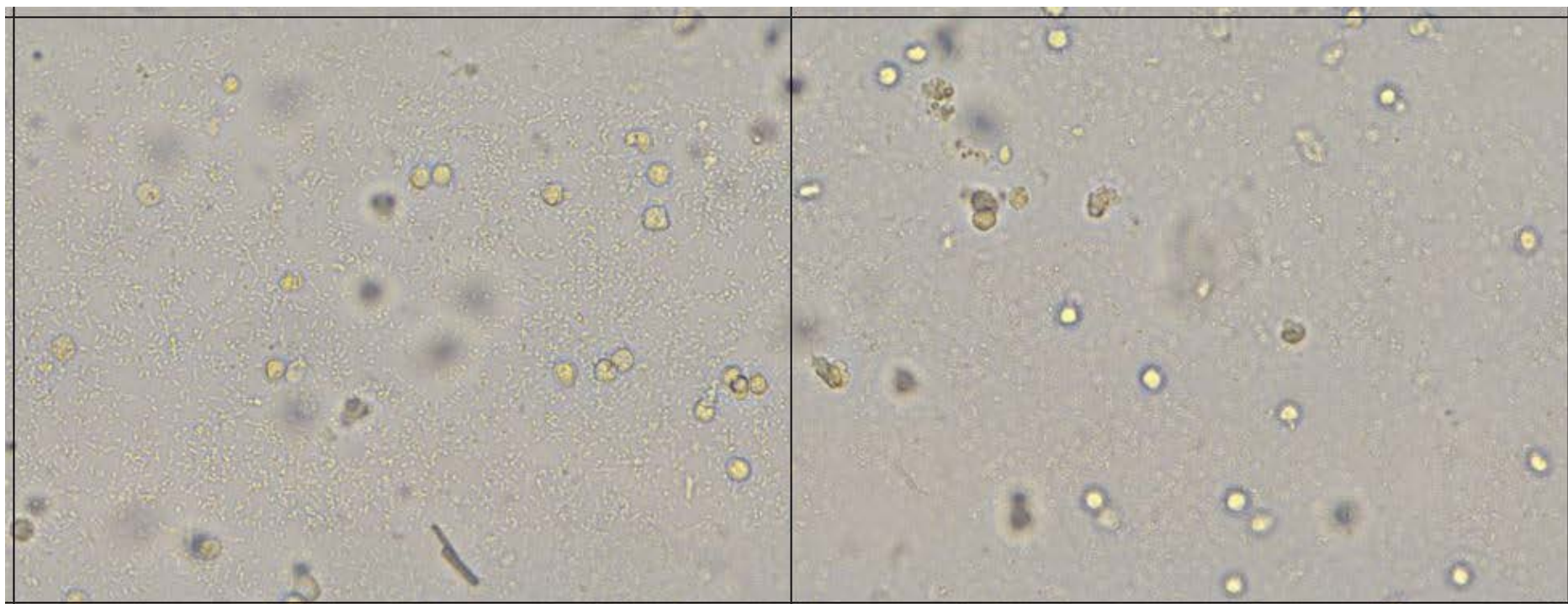


Field 5 and 6

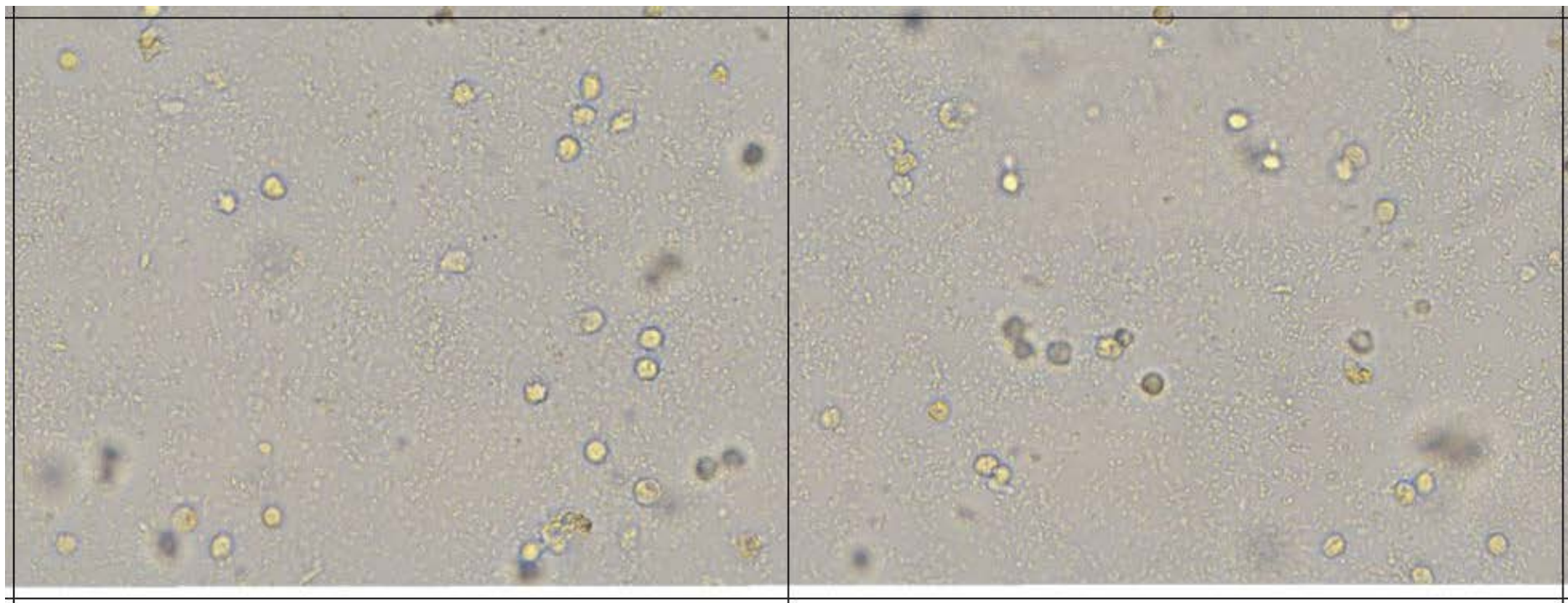




Field 7 and 8



Field 9 and 10



[Show/hide comprehension question](#)

Value: 1

After observing the 10 high power fields, what would you report for the number of WBC present?

- a. None
- b. 0-2
- c. 2-5
- d. 5-10
- e. 10-25
- f. 25-50
- g. 50-100

[Show/hide comprehension question...](#)

Value: 1

Did you see WBC clumps?

- a. yes
- b. no



[Show/hide comprehension question...](#)

Value: 1

What would you report for squamous epithelial cells?

a. none

b. occasional

c. small

d. moderate

e. large

[Show/hide comprehension question...](#)

Value: 1

Please select which of the following you would report as present in this urine specimen. You may select all, some or none.

[mark all correct answers]

a. amorphous urates

b. amorphous phosphates

c. renal tubular epithelial cells

d. transitional epithelial cells

e. crystals

f. sperm

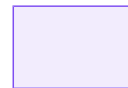
g. yeast

h. mucus

Please complete the microscopic report on the Helen Humphries lab report form (above) and either upload it or hand it in during class.

After finishing this lesson, complete the form below:

Type your name or identifier:



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All pictures are available for OER use. Module export is also available in ePub format.

The case study lesson provides z-stack photos created using a Panoptiq digital microscope and step by step process for urine analysis. Access to video is in process with a ongoing Panoptiq company partnership.