4. PSA

Ward	Casualty Department	**D.O.B/Age**	04/12/1940
Consultant			

Prostate-specific Ag (PSA) **949.50 H**
ug/L <4.00

Urinary retention.

Request form: Lower urinary tract symptoms and urinary retention.

Important clinical findings to assess for include:
General: Temporal wasting, signs of urinary incontinence (e.g. any leaking noted, need to wear sanitary products)
Abdominal: Assess for masses, palpable bladder from retention
P.R: Assess prostate for size, consistency, tenderness.
CNS: Assess for any neurological fallout as prostatic metastasis tend to metastasize to the lower vertebrae.

Creatinine 83
umol/L 64 – 104
eGFR (MDRD formula) >60
mL/min/1.73 m2

White Cell Count 5.01 x
109/L 3.92 – 10.40
Red Cell Count 5.39 x
1012/L 4.50 – 5.50
Haemoglobin 15.5
g/dL 13.0 – 17.0
Haematocrit 0.485
L/L 0.400 – 0.500
MCV 90.0
fL 83.1 – 101.6
MCH 28.8
pg 27.8 – 34.8

MCHC		**32.0 L**	
g/dL	33.0 – 35.0		
Red Cell Distribution Width		13.2	
%	12.1 – 16.3		
Platelet Count		226	x
109/L	171 – 388		

PATHOLOGICAL DIAGNOSIS:

Prostate, biopsy: Adenocarcinoma.

Imaging studies may be necessary if there is a concern for metastasis and these will be guided by the clinical presentation e.g. CXR if metastasis to the lungs is suspected vs MRI if there is a concern of vertebral collapse.

Prostatic adenocarcinoma.

- Prostate-specific antigen (PSA) is a protein produced by normal prostatic cells. The majority of PSA is produced by the glands in the transitional zone of the prostate (BPH). The peripheral zone, where 80% of prostate cancers originate, produces very little PSA.
- An enlarged prostate can cause obstructive uropathy. The creatinine values in this patient do not suggest renal impairment though a baseline creatinine would be required to assess this.
- PSA is used for screening, diagnosis as well as monitoring of prostate related disease processes. PSA is an organ-specific, not a cancer-specific marker. It is useful in detection, staging and monitoring of prostate cancer.
- To improve diagnostic accuracy when PSA is between 4-10ug/L (“grey zone”), free PSA is measured and the free/total PSA ratio is calculated. Most normal PSA is protein-bound, and in prostatic cancer, a greater proportion is unbound. A free/total PSA ratio <0.25 increases the likelihood of cancer.