

PROSTATE CANCER BIOREPOSITORY NETWORK

Datasheet No: 004 – 125 CASE HORMONE SENSITIVITY TMA (125HS_TMA) Created: Version 1.0: January 2020

TMA Name	125 Case Hormone Sensitivity (125HS TMA)		
Description	A tissue microarray for testing biomarkers associated with androgen sensitivity. This TMA contains tumor samples from primary prostate cancer derived from transurethral resections of the prostate (TURP). Samples are derived from cases with preceding hormone therapy (surgical and/or medical) and matched cases without preceding hormone therapy. All cases are obtained from the NYU Site of the Prostate Cancer Biorepository Network, and are collected with institutional review board approval.		
Cases	67 TURP specimens with history of hormone treatment, 58 TURP specimens with no history of hormone treatment, normal tissue (kidney, spleen, liver), cell lines		
Sample Selection	Tumor cores are sampled from TURP specimens, from areas of representative grade cancer. Each TURP case is arrayed in duplicate to address possible tissue heterogeneity and preservation artifact.		
Construction	This TMA is assembled using the MTA1 microarrayer (Beecher Instruments, Sun Prairie, Wisconsin) and constructed over 2 blocks (completed November 2019)		
Cores	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Block A</p> </div> <div style="text-align: center;"> <p>Block B</p> </div> </div>		
Diameter	0.6mm	Thickness	5µm
Layout	<p>Block A: 19 columns x 15 rows, 215 cores: 78 hormone refractory, 78 hormone naïve, 32 normal tissue (kidney, liver, spleen), 27 cell line (from 2 prostate cancer cell lines) Orienting Cores: Kidney cores (Column 1, rows 1 and 2)</p> <p>Block B: 19 columns x 13 rows, 191 cores: 65 hormone refractory, 57 hormone naïve, 56 normal tissue (kidney, liver, spleen), 14 cell line (from 1 prostate cancer cell line) Orienting Cores: Kidney cores (Column 1, rows 2 and 3), Liver/Kidney cores (Row 1, columns 10, 11, 12, 13)</p>		
Quality Control	Initial section and 6 th hematoxylin and eosin section to confirm sampling.		
TMA Slide Types	Unstained: unstained paraffin TMA slide for final analysis (>90% cores present). Test slides: unstained paraffin TMA slide for optimization (titrating Ab and experiment conditions; up to 10-25% cores may be missing)		
Data	Data dictionary on page 3 and sheet 1 of excel file. Data derived from electronic medical records (HIS & LIS) & tumor registry. Vital status cross checked with social security death index.		

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125 HS TMA			
<u>TURP Cohort</u>		<u>(n=125)</u>	
		<u>Number (n)</u>	<u>Percentage (%)</u>
Hormone Naïve*	# in cohort	57	45.6
Hormone Treated	# in cohort	68	54.4
Gleason Grade Group	3	6	4.8
	4	13	10.4
	5	106	84.8
Hormone treatment prior to TURP	No hormone treatment	51	40.8
	Treatment within 6 weeks	6*	4.8
	Treatment over 6 weeks	68	54.4
Radiation prior to TURP	Hormone Naïve	5	4.0
	Hormone Resistant	19	15.2
Mets at TURP (M+)	Hormone Naïve	5**	4.0
	Hormone Resistant	36	28.8
Age (mean, in years)	Hormone Naïve	76.0	
	Hormone Resistant	73.7	
Survival from TURP (mean, in years)	Hormone Naïve	3.09	
	Hormone Resistant	2.08	
* Hormone naïve cohort includes 6 cases with incomplete treatment response (TURP performed less than 6 weeks after orchiectomy)			
** 5 Hormone naïve cases diagnosed with metastasis prior to TURP with no medical treatment prior to TURP			

	Hormone Naïve	Incomplete Treatment Received	Hormone Treated
N =	51	6	68
Age (mean, in years)	75.9	76.5	73.7
Survival length (TURP to death, mean in years)	3.15	2.64	2.08
Mets at time of TURP (M+)	5	0	36
Hormone Tx prior to TURP	0	6	68

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Data Dictionary	
Data Element	Definition
HR/HN Category at TURP:	<p>HN: "Hormone Naïve": No hormone therapy prior to TURP</p> <p>HN (incomplete): Hormone therapy received however duration of treatment was less than 2 months prior to TURP</p> <p>HR: "Hormone Received": Hormone therapy received was greater than 2 months prior to TURP</p>
Hormone Therapy:	<p>Surgical Hormone Therapy: Bilateral orchiectomy / surgical castration</p> <p>Medical Hormone Therapy:</p> <ul style="list-style-type: none"> - Luteinizing hormone-releasing hormone (LHRH) or gonadotropin-releasing hormone (GnRH) agonist and antagonists mimics a surgical castration, stops testosterone production (Leuprolide, Goserelin, Triptorelin, Histrelin, Degarelix) - Anti-androgens block testosterone from reaching cancer cells (Bicalutamide, Nilutamide, Flutamide, Abiraterone, and Enzalutamide). Abiraterone and Enzalutamide are recommended as second-line hormonal treatment in CRPC patients
Case ID:	Case Identifying number. When "- 1, - 2, or - 3" is listed after Case ID, multiple TURPs for the same patient are included in TMA
HS TMA Block:	Hormone Sensitivity TMA Block A or TMA Block B (14 cases from Block A were supplemented in Block B)
Age at TURP:	Patient age at time of surgery
Age of Block:	Time in years from TURP to TMA block construction
Grade group:	Prostate cancer grading system
Metastatic at TURP:	Metastatic prostate cancer diagnosis before or at time of TURP
Metastatic sites:	Bone, Lymph Node, Brain, Visceral (liver or lung)
Orchiectomy (before/at time of TURP):	Surgical castration: Yes or No
Time from prior Orchiectomy to TURP (years):	Time in years from surgical castration to TURP
First-line medical hormone Tx (before/at time of TURP):	First-line by medical hormone suppression by Bicalutamide, Leuprolide, Degarelix: Yes or No
Time from prior First-line hormone Tx to TURP (years):	Time in years from first-line hormone treatment to TURP
Second-line medical hormone Tx (before/at time of TURP):	Second-line hormone suppression by Enzalutamide, Abiraterone
Time from Second-line hormone Tx to TURP (years):	Time in years from second-line hormone treatment to TURP
Radiation (before/at time of TURP):	Radiation therapy prior to or at time of TURP: Yes or No
Time from Radiation to TURP (years):	Time in years from radiation therapy to TURP
Chemotherapy (before/at time of TURP):	Chemotherapy prior to or at time of TURP: Yes or No
Time from Chemotherapy to TURP (years):	Time in years from chemotherapy to TURP
Vital Status:	Dead or Alive
Survival (TURP to death in years):	Time in years from TURP Surgery to date of death