

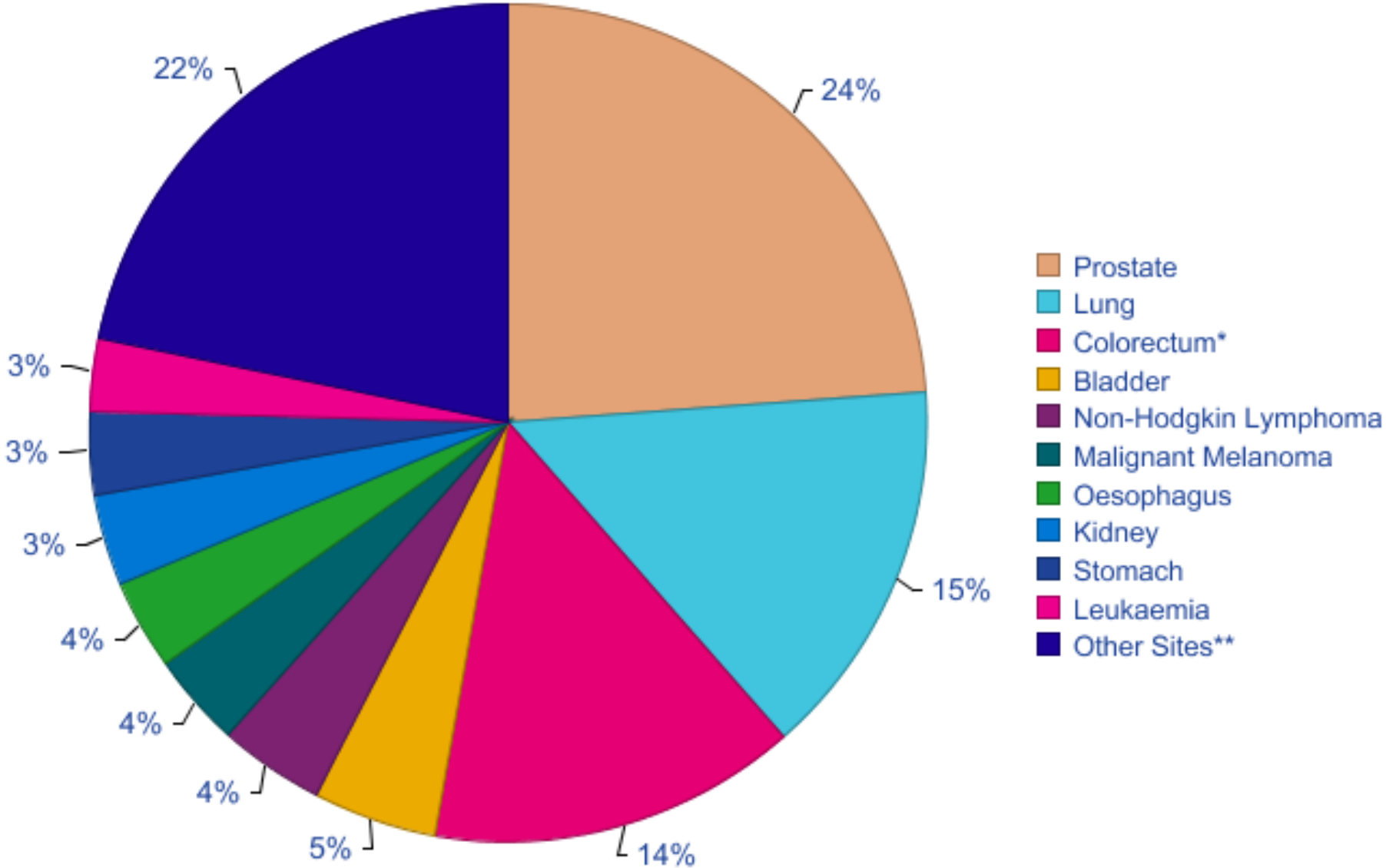
PSA Tracker - A novel approach to the long term management of prostate cancer

Miranda Benney

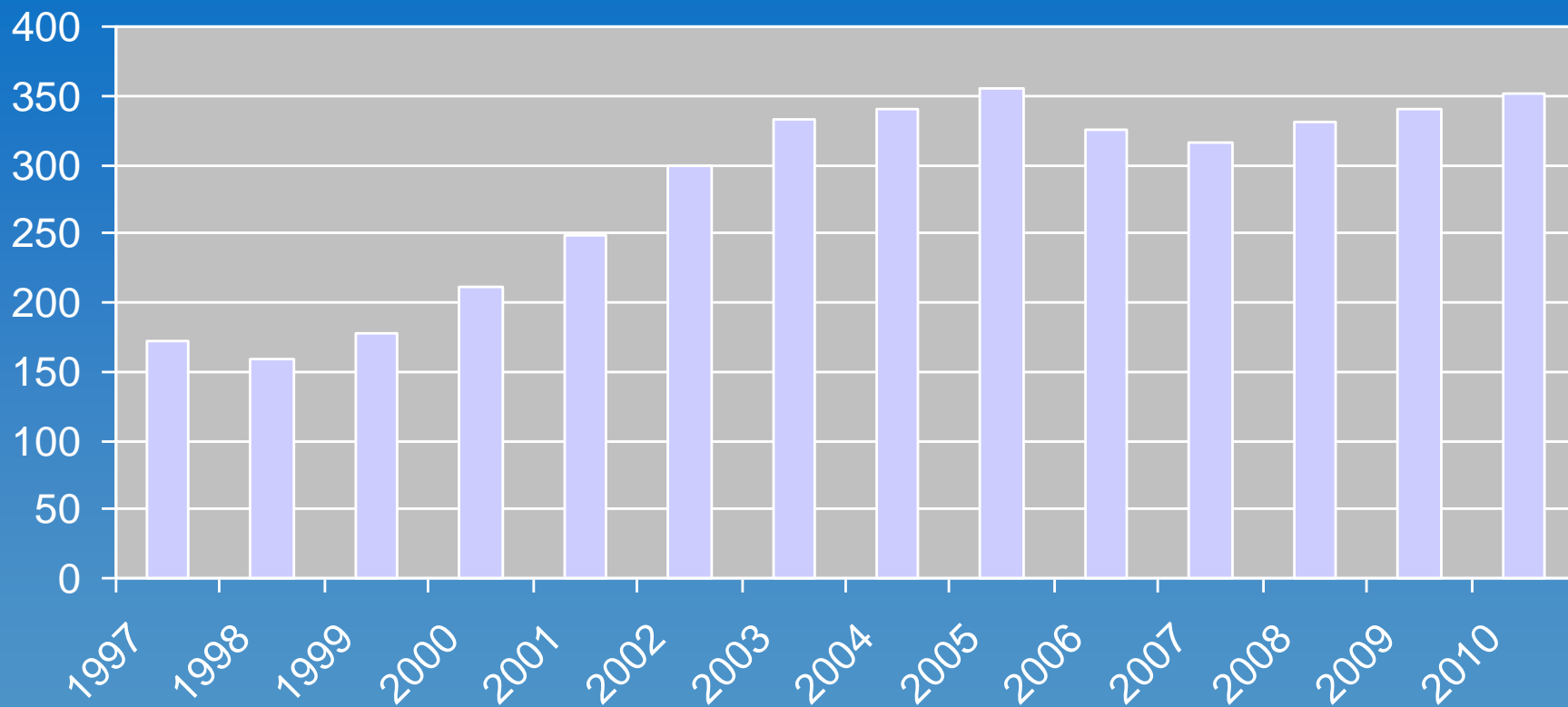
Macmillan Uro-oncology Specialist Nurse

Wednesday 18th May 2011

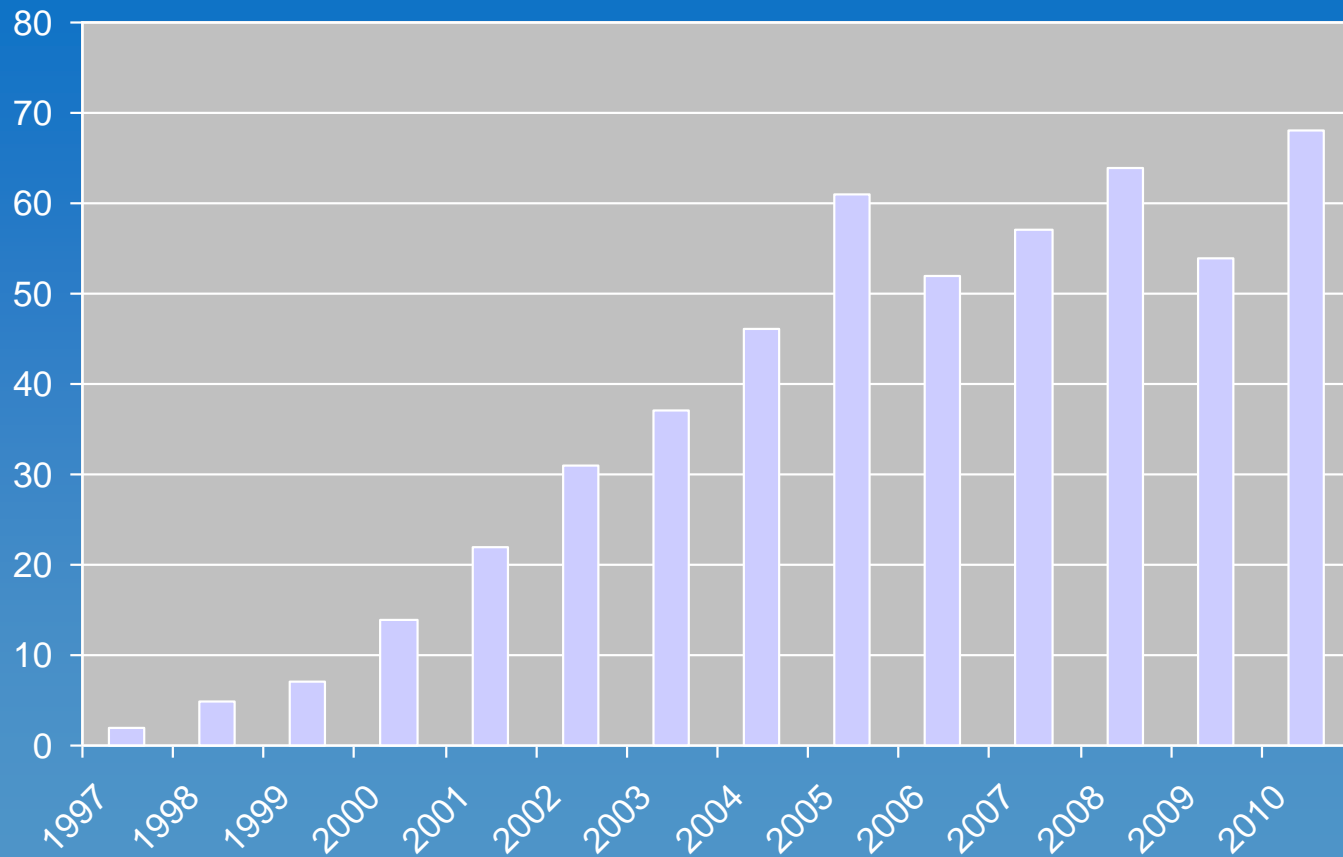
10 Common Uk Male Cancers 2008



New cases of prostate cancer in Bath 1997-2010



Radical prostatectomy in Bath 1997-2010





Hypothesis

Most men with prostate cancer have stable or low risk disease which can be safely monitored remotely with PSA blood tests alone



Purpose

- To reduce pressure on clinical staff, clinic facilities and administration staff
- To provide remote nurse led follow up
- Improve delivery and continuity of care for patients



PSA Tracker

- A computer database
- Automated letter to patient, with blood request form attached
- PSA test taken at Health Centre
- Results are entered and interpreted by Uro-oncology Specialist Nurse
- Patient is either recalled to clinic or continues on remote follow-up
- Automated letters sent to patient and GP

Process

- Recruitment started August 2004
 - Treated or stable monitored disease
 - PSA producing tumour
 - Compliant patient

Patient Selection

- Radical treatment
 - Surgery
 - External Beam Radiotherapy
 - Brachytherapy
- Hormonal treatment
- Raised PSA but negative prostate biopsies

1) Enter the patient's details.

Surname

Forname

Title Mr Other: **DOB**

Hospital No.

Address 1

Address 2

Town / City

Postcode

Phone Number

Diagnosis Date **Initial PSA** **Gleason** +

Next Test Due **Initial Stage**

History

GP

GP Surgery

Address

Phone Number

Add New GP

Edit Selected GP

2) Click the Update button to add this Patient.

Enter PSA Results

Update

Close

Enter the Patient's details and click the Update button.

DEPARTMENT OF UROLOGY
Uro-oncology nurses direct line 01225 82????

<Date>

<Name> <Surname>
<Address1>
<Address2>
<Address3>
<Address4>
<Postcode>

Dear Mr <Surname>


I'm pleased to say that your latest PSA test is satisfactory. You should have your next PSA test within 2 weeks of <PSA_due_date>. Please keep the form attached below in a safe place, and use it to have this test. You should not have any other PSA tests before this time, unless your GP instructs you otherwise.

If you have any questions or problems before then you should either contact your GP or telephone the Urology Department using the number above. We would also like to hear from you if you have any of the following symptoms;

- Blood in the urine
- Increasing difficulties in passing urine
- Aches and pains in the bones lasting more than 1 week

Yours sincerely

Mr J McFarlane MS FRCS(Urol)
Consultant Urologist

Royal United Hospital Bath 		LABORATORY REQUEST FORM			LAB NUMBER
NHS Trust		NHS PATIENTS ONLY			
PLEASE PRINT IN BLOCK CAPITALS USING A BALLPOINT PEN		SPECIMEN TYPE			
DIRECTORATE OF PATHOLOGY, ROYAL UNITED HOSPITAL NHS TRUST, BATH BA1 3NG TELEPHONE 01225 824700		BLOOD	URINE	OTHER (SPECIFY)	
		<input checked="" type="checkbox"/>			
REGISTRATION NUMBER	NHS NUMBER	BIOHAZARD? <input type="checkbox"/> YES <input type="checkbox"/> NO			
<Hospital number>		IF "YES", STICKERS MUST BE ATTACHED TO SPECIMEN AND FORM			
SURNAME	(PREVIOUS SURNAME)	DATE OF COLLECTION		TIME	
<Surname>					
FORENAMES					
<Forename>					
DATE OF BIRTH	SEX	SPECIAL INSTRUCTIONS:			
<DOB>	M				
WARD/GP CODE		DR'S NAME/BLEEP/TEL.NO		BIOCHEMISTRY	
UROLOGY OPD		MCFARLANE		TESTS REQUIRED: (tick boxes)	
CONSULTANT		HOSPITAL		<input checked="" type="checkbox"/> PSA	
JPM		RUH			
PATIENT'S ADDRESS & POSTCODE			ADDITIONAL COPIES TO:		
<Address1> <Address2>			1 Uro-oncology nurses (Urology Dept)		
<Address3> <Address4>			2		
<Postcode>			3		
CLINICAL DETAILS - INCLUDE RELEVANT DRUG THERAPY, OPERATIONS, ETC.					
This patient is on the computerised PSA follow-up programme					
Please label report "PSA Tracker" to allow rapid processing					

DEPARTMENT OF UROLOGY

Mr J McFarlane

Direct line 01225 824575

<Date>

<Name> <Surname>

<Address1>

<Address2>

<Address3>

<Postcode>

Dear Mr <Surname>

Your latest PSA test is slightly higher than the last one. This may well not require any treatment, but I would like to discuss this with you further in the outpatient clinic. An appointment letter is enclosed.

Yours sincerely

Mr J McFarlane MS FRCS(Urol)
Consultant Urologist

Process

- 1 clinic session per week
- Direct number for patient queries
- Access back into MDT
- Dedicated slots available for those who are recalled back to clinic

Results April 2011

- 765 pts enrolled
- 3600 OPA's saved
- 15 pts declined offer of remote follow-up
- Many have forgotten, but most respond to reminder letter
- No unexpected deaths (30 pts have died from unrelated causes)

Results April 2011

- No admissions or outpatient attendances from complications related to prostate cancer
- 85 patients have required recall to clinic due to disease progression or rises in PSA and re-biopsy offered if necessary
- Some patients have gone back onto remote follow up after a period of clinic monitoring

Patient Satisfaction Audit

To ensure patients are comfortable being monitored via the PSA Tracker

To ensure that patients are satisfied with the information they receive about the system

Methodology and Results

- Patient questionnaire sent to the first 126 patients
(Including patients who were active and suspended)
- 76% response rate
- 2 patients did not know what the PSA Tracker was and were excluded from the analysis

Main Benefits

- 80 said not having to travel to the RUH
- 60 said not having parking problems
- 61 said not having to wait in outpatients
- 11 said needing less time off work

Other Benefits

“Far quicker to visit GP surgery”

“Keeping an eye on my condition”

“Knowing my PSA results and regular PSA assessments”

“Prompted to have blood test”

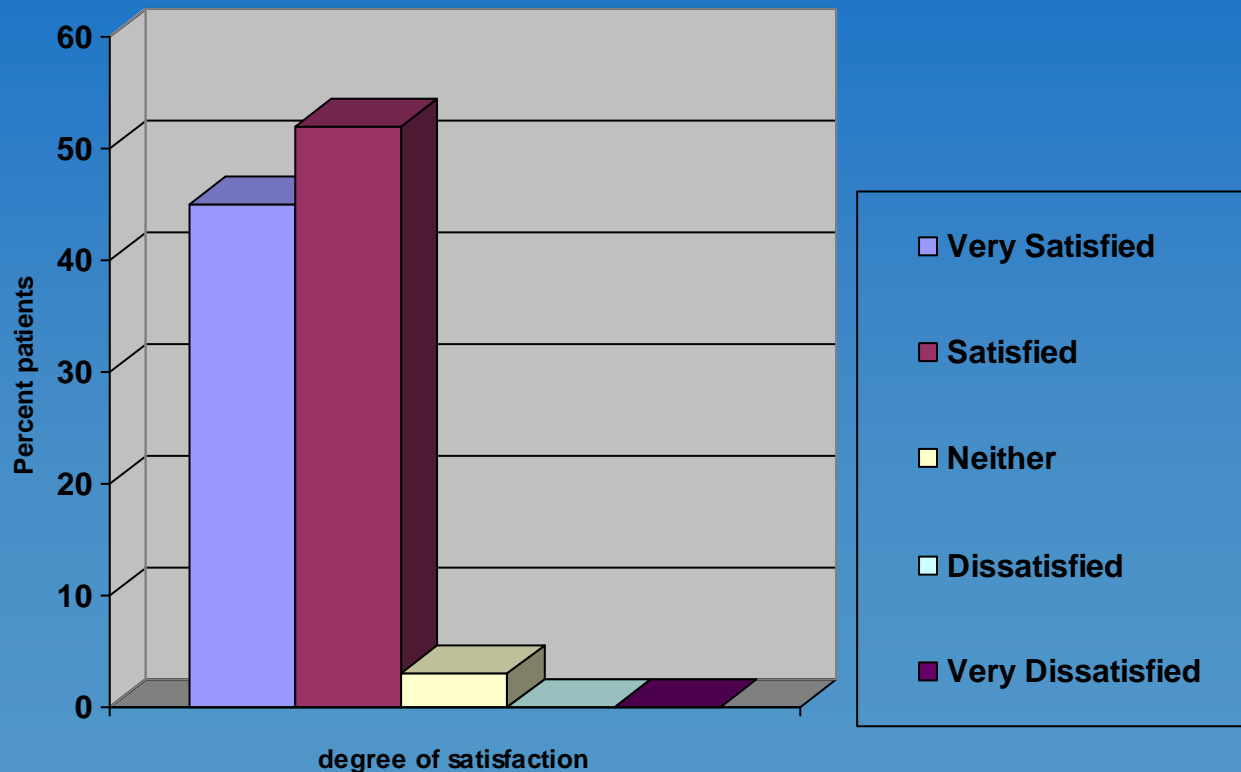
“Satisfaction with my consultant”

Disadvantages

- “none provided test results are negative, otherwise all very positive”
- “lack of face to face exchange and not knowing exact PSA level”
- “..no chance to speak to consultant about any minor problems”
- “none provided I can ring RUH urology to discuss any problems”
- “just being able to remember to book a blood test at the appropriate time”

Overall Satisfaction

97% patients altogether were either satisfied or very satisfied.



PSA Tracker Check Clinics

- Pts on the Tracker > 2 years, and not seen in Urology clinic
- 87 people seen over 3 clinics, by either Consultant Urologist or Registrar
- Recent PSA, DRE performed
- 2 refused to come back to clinic

Results

- **73 pt (84%) had no change in condition**
- **3 (3.4%) had cancer changes**
 - 1 rising PSA, but would have been recalled
 - 2 in stage, commenced alpha blocker/ PDE5 inhibitor
- **7 (8%) had non cancer changes**
 - 1 re biopsy due to DRE change, no cancer
 - 6 medication changes
- **4 (4.6%) Suspended, no longer needing follow up**

Developments

- Working with NHS Improvements and North Bristol NHS Trust
- Web based program
- Linked with hospital systems
- Due late Autumn 2011
- Extend to other disease markers

User Name - Test User

Home

Welcome to the Tracking system

The application is a remote test monitoring system for patients risk stratified as suitable for supported self management pathways for prostate and colorectal cancer. This application will help manage :-

- Prostate Cancer - PSA blood test
- Colorectal Cancer - CEA blood test
- Colorectal Cancer - CT scanning (abdomen, chest)
- Colorectal Cancer - Endoscopy tests (Sigmoidoscopy, colonoscopy)

User Name - Test User

Prostate Search

Filter Section

Forename	<input type="text"/>	Surname	<input type="text"/>
Date of birth	Day <input type="text"/> Month <input type="text"/> Year <input type="text"/>	Postcode	<input type="text"/>
NHS Number	<input type="text"/>	Hospital number	<input type="text"/>
Show By	<input checked="" type="radio"/> All	<input type="radio"/> Registered	<input type="radio"/> Not Registered
	<input type="radio"/> Suspended		
Order By	<input checked="" type="radio"/> Surname	<input type="radio"/> Forename	<input type="radio"/> DOB
	<input type="radio"/> NHS Number	<input type="radio"/> Postcode	<input type="radio"/> Registered

Client Name	NHS Number	HRN	DOB	Address	Cancer Site	ICD10Code	Registered
MR Peter Harris	11111111	AAAAAAA	23/05/1964	23, Bournside Drive, Cheltenham, Glos, GL23 5AP.	Prostate	C20X	✓
Mr Richard Harris	1234567891	F987654	22/09/1963	46D, Montpellier Spa Road, Cheltenham, Glos, GL50 1UL.	Prostate	C20X	✓
Mr Richard Burton	88888888	HHHHHHH	30/05/1969	30, Bournside Drive, Cheltenham, Glos, GL23 5AP.	Prostate	C20X	✓
Mr Harry Ford	99999999	IIIIIIII	01/06/1970	31, Bournside Drive, Cheltenham, Glos, GL23 5AP.	Prostate	C20X	✓
Mary Jones	6543210987	S2345678	24/01/1956	Flat 2, 44 Gloucester Road, Horfield, Bristol, Avon, BS8 2KD.	Prostate	C20X	✓
Mr Richard Hadwin	789456123	159753456	12/09/1967	21, Landsdown Road, Cheltenham, Glos, GL50 6UL.	Prostate		✓
Mr Alan Gray	66666666	FFFFFFF	28/05/1967	28, Bournside Drive, Cheltenham, Glos, GL23 5AP.	Prostate	C20X	✗
Mr Ray Jones	77777777	GGGGGGG	29/05/1968	29, Bournside Drive, Cheltenham, Glos, GL23 5AP.	Prostate	C20X	✗
Miss Julia Magro	456789123	789456123	04/07/1975	66, Hales Road, Cheltenham, Glos, GL52 6SS.	Prostate		✗
Mrs Jane Perry	111111110	LLLLLLL	02/06/1971	32, Bournside Drive, Cheltenham, Glos, GL23 5AP.	Prostate	C20X	✗

Prostate |

Home > **Prostate Tracking**

[\[Application Comments\]](#)

[\[Suspend Client\]](#)

[\[Print Client Information\]](#)

[\[Combined Page\]](#)

[\[View alerts\]](#)

[\[Prostate Search\]](#)

User Name - Test User

Prostate Tracking

Client Details

History

PSA Values

Documents

Client Details

NHS Number	11111111	Hospital number	AAAAAAAA
Full Name	MR Peter Harris	Date of birth	23/05/1964
Contact number	0111111111		

[more info ..](#) 

GP Details

GP Name	001 Peter Wells	Practice	Wells Surgery
Email	simon@halidon.demon.co.uk	Address	Tewksbury Road, Cheltenham, Glos, GL52 6SS.
ContactNumber	12420609321		

[Please click here to hide/show Audit History](#) 

Prostate |

Home > **Prostate Tracking**

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User Name - Test User

Prostate Tracking

Client Details

History

PSA Values

Documents

Initial tumour data

Initial PSA at Diagnosis : 23/05/2009 Value : 29.0

Gleason : 3 + 4 *

Clinical stage : T3 *

Next due date : 1 7 2011 *

Normal Higher Range in ng/ml : 45 *

Submit

Date	History	Editor	Modified	Edit	Delete
10/05/2011	Commenced hormones	Test User	10/05/2011	Edit	<input type="checkbox"/>
13/10/2011	Radiotherapy 7/52	Test User	10/05/2011	Edit	<input type="checkbox"/>

Delete

Add new history

History date : 11 5 2011 *

Please add history :

*

Submit

Please click here to hide/show Audit History 

User Name - Test User

Prostate Tracking

[Client Details](#)

[History](#)

[PSA Values](#)

[Documents](#)

Date	PSA Value	Treatment	Diagnosis	Edit	Delete
23/05/2009	29.0	LHRHa + anti-androgen	✓	Edit	<input type="checkbox"/>
23/08/2009	30.0	LHRHa + anti-androgen		Edit	<input type="checkbox"/>
23/11/2009	31.0	LHRHa + anti-androgen		Edit	<input type="checkbox"/>
23/02/2010	34.0	LHRHa + anti-androgen		Edit	<input type="checkbox"/>

[Delete](#)

Add PSA value

PSA Value : *

PSA Date : *

Treatment :

PSA at diagnosis? :

[Submit](#)

Prostate

Home > Tracking > ProstateTracking Combined

[Generate Summary]

[Suspend Client] [PrintClientInformation] [Tabbed Page] [New alert] [Prostate Search]

User Name - Test User

Prostate Tracking Combined

Alerts

 Due date exceeded P&R actions **Completed**

Client Details

NHS Number	+234567891	Hospital number	987654
Full Name	Mr Richard Harris	Date of birth	22/08/1988
Contact number	012345678912		

more info ...

Initial tumour data

GP details

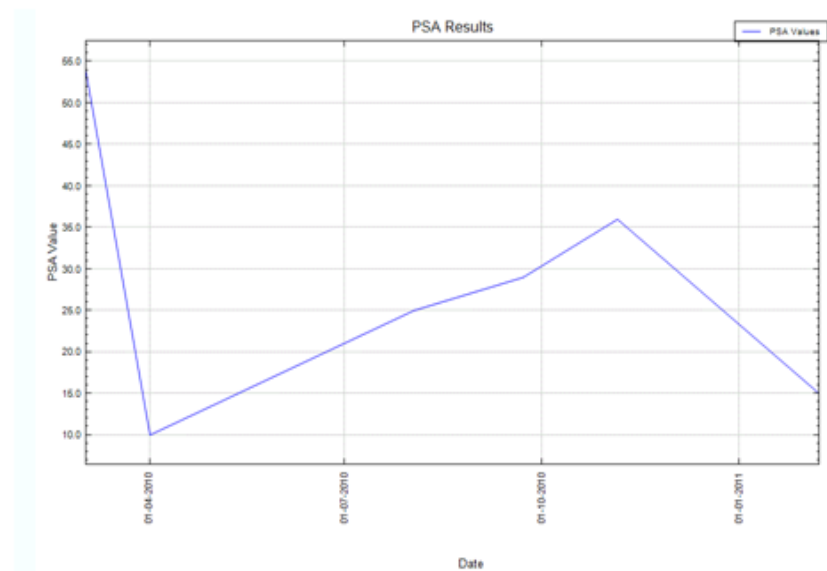
Date	History	Editor	Modified	Col	Delete
07/08/2010	Presented to GP with LUTS, bone pain. Staging bone scan/CT shows widespread pelvic LN and bony metastasis in L5. Previous M2007. Commenced Soladin.	Simon Webberley	02/02/2011	Col	Delete
02/02/2011	Client has been suspended	Simon Webberley	02/02/2011	Col	Delete
02/02/2011	Client has been released	Simon Webberley	02/02/2011	Col	Delete

Add History

Date	PSA Value	Treatment	Diagnosis	Col	Delete
02/09/2010	24.0	LHRHa	✓	Col	Delete
01/06/2010	10.0	LHRHa		Col	Delete
02/08/2010	22.0	LHRHa + anti-androgen		Col	Delete
22/08/2010	28.0	LHRHa + anti-androgen		Col	Delete
02/11/2010	26.0	Docetaxel		Col	Delete
07/02/2011	15.0	Docetaxel		Col	Delete

Add PSA value

Show chart

















Print Letters

Please click here to hide/show AuthHistory

User Name - Test User

Prostate Tracking

[Client Details](#) [History](#) [PSA Values](#) [Documents](#)

Date Modified	Editor	Description	Open Letter	Open Template	Delete
07/03/2011	Simon Webberley	GP Letter - High PSA Recall			<input type="checkbox"/>
07/03/2011	Simon Webberley	High PSA - patient recall letter			<input type="checkbox"/>
07/03/2011	Simon Webberley	High PSA recall letter			<input type="checkbox"/>
07/03/2011	Simon Webberley	Overdue test			<input type="checkbox"/>
07/03/2011	Simon Webberley	Patient Introductory letter			<input type="checkbox"/>
07/03/2011	Simon Webberley	Patient letter			<input type="checkbox"/>
07/03/2011	Simon Webberley	Satisfactory PSA letter			<input type="checkbox"/>

[Delete](#)

Upload template

This is used to upload templates to the server. Click browse to select a template on your local machine. Add a description (this is the text that will be shown in the table) then click submit.

Click browse button to select file

[Browse...](#) *

[Submit](#)

[Cancel](#)

Description of content of file

 *

Prostate |

Home > **View alerts**

[\[Application Comments\]](#)

User Name - Test User

View alerts

Client Name	NHS Number	Hospital number	DOB	Range	Due Date	Alert
Mr Richard Hadwin	789456123	159753456	12/09/1967	8	02/02/2011	19/04/2011 Client has died
Mary Jones	6543210987	S2345678	24/01/1956	10	03/03/2011	11/05/2011 Due date exceeded 02/05/2011 PSA range exceeded
Mr Richard Harris	1234567891	F987654	22/09/1963	0	10/03/2011	08/05/2011 Due date exceeded 08/05/2011 PSA test late
Mr Harry Ford	99999999		01/06/1970	8	10/05/2011	05/05/2011 PSA range exceeded 10/05/2011 Due date exceeded

User Name - Test User

Prostate Tracking Combined

Alerts

Due date exceeded PSA test late

Completed

Client Details

NHS Number	1234567891	Hospital number	F987654
Full Name	Mr Richard Harris	Date of birth	22/09/1963
Contact number	012420709612		

more info .. [+](#)

Initial tumour data [+](#)

GP details [+](#)

Date	History	Editor	Modified	Edit	Delete
07/08/2010	Presented to GP with LUTS, bone pain. Staging bone scan/CT shows widespread pelvic LN and likely metastasis in L5. Previous MI 2007. Commenced Zoladex	Simon Webberley	02/05/2011	Edit	<input type="checkbox"/>
02/05/2011	Client has been suspended	Simon Webberley	02/05/2011	Edit	<input type="checkbox"/>
02/05/2011	Client has been reinstated	Simon Webberley	02/05/2011	Edit	<input type="checkbox"/>
08/05/2011	Reminder letter sent	Test User	08/05/2011	Edit	<input type="checkbox"/>
08/05/2011	Client has been suspended	Test User	08/05/2011	Edit	<input type="checkbox"/>
08/05/2011	Client has been reinstated	Test User	08/05/2011	Edit	<input type="checkbox"/>

Delete

Conclusions

- Safe
- Effective
- Popular
- Efficient
- Cheap
- Environmentally friendly

Thank you

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01225 821784

jonathan.mcfarlane@ruh.nhs.uk

01225 824575

DRE does not influence management in prostate cancer

Obek C, Neulander E, Sadek S, Soloway MS. Is there a role for digital rectal examination in the follow up of patients after radical prostatectomy.
J Urol 1999, **162**:762-4

Pound CR, Christens-Barry OW, Gurganus RT, Partin AW, Walsh PC. Digital rectal examination and imaging studies are unnecessary in men with undetectable prostate specific antigen following radical prostatectomy.
J Urol 1999, **162**:1337-40

Johnstone PA, McFarland JT, Riffenburgh RH, Amling CL. Efficacy of digital rectal examination after radiotherapy for prostate cancer.
J Urol 2001, **166**:1684-7

Lattouf JB, Saad F. Digital Rectal Examination Following Prostatectomy: Is it still necessary with the use of PSA?
Eur Urol 2003, **43**:333-4

Ragavan et al. Is DRE essential for the follow up of prostate cancer patients? A prospective audit of 194 patients.
BMC Urology 2005, **5**:1