Queen Mary
University of London

Introducing APL-Renal

Helping practices manage CKD

Dr John Robson
CEG Clinical Lead, Clinical Reader in Primary Care Research & Development

Luis Rivas
Primary Care Facilitator for City & Hackney

Clinical Effectiveness Group (CEG)

What we'll cover

- Who are the Clinical Effectiveness Group?
- Introducing APL-Renal
- What to do next – checklist
- Support – who to contact
- Questions

Who are the Clinical Effectiveness Group?

- We are GPs, analysts, data scientists and facilitators based at Queen Mary University of London
- Access to primary care data across NEL
- Build dashboards, searches and software tools for GP teams, NHS commissioners and public health
- Facilitators and support officers to support every practice
- Publish research of national and international significance
- Funded by NHS and local authorities in NEL + research grants

Queen Mary, Whitechapel campus

APL-Renal - Lists all adults with key indicators of CKD

Flags critical falls in eGFR

Filter your list into cohorts to take action

- Follow-up for overdue measures
- Referral for serious deterioration
- Improve CKD coding

Patient review page - tailor your approach

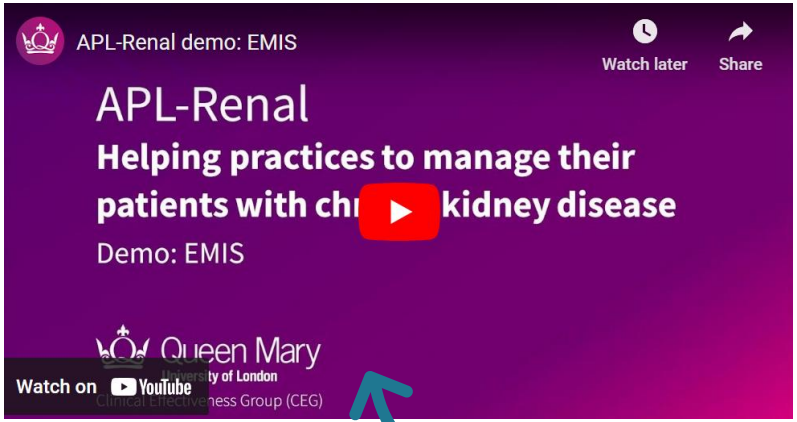
See eGFR trend over time, urine ACR, blood pressure and key medications

Export data

List of patients to send appointment messages, or key info to send with a referral

Supporting elements

qmul.ac.uk/ceg/support-for-gp-practices/resources/software-tools/apl-renal



Demo video

User guides

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Let’s see the tool in action!

qmul.ac.uk/ceg
@QMUL_CEG

Supporting elements

Integrated system of cutting-edge templates and one-to-one in practice facilitation support

APL Renal Tool

Selects combinations of risk factors

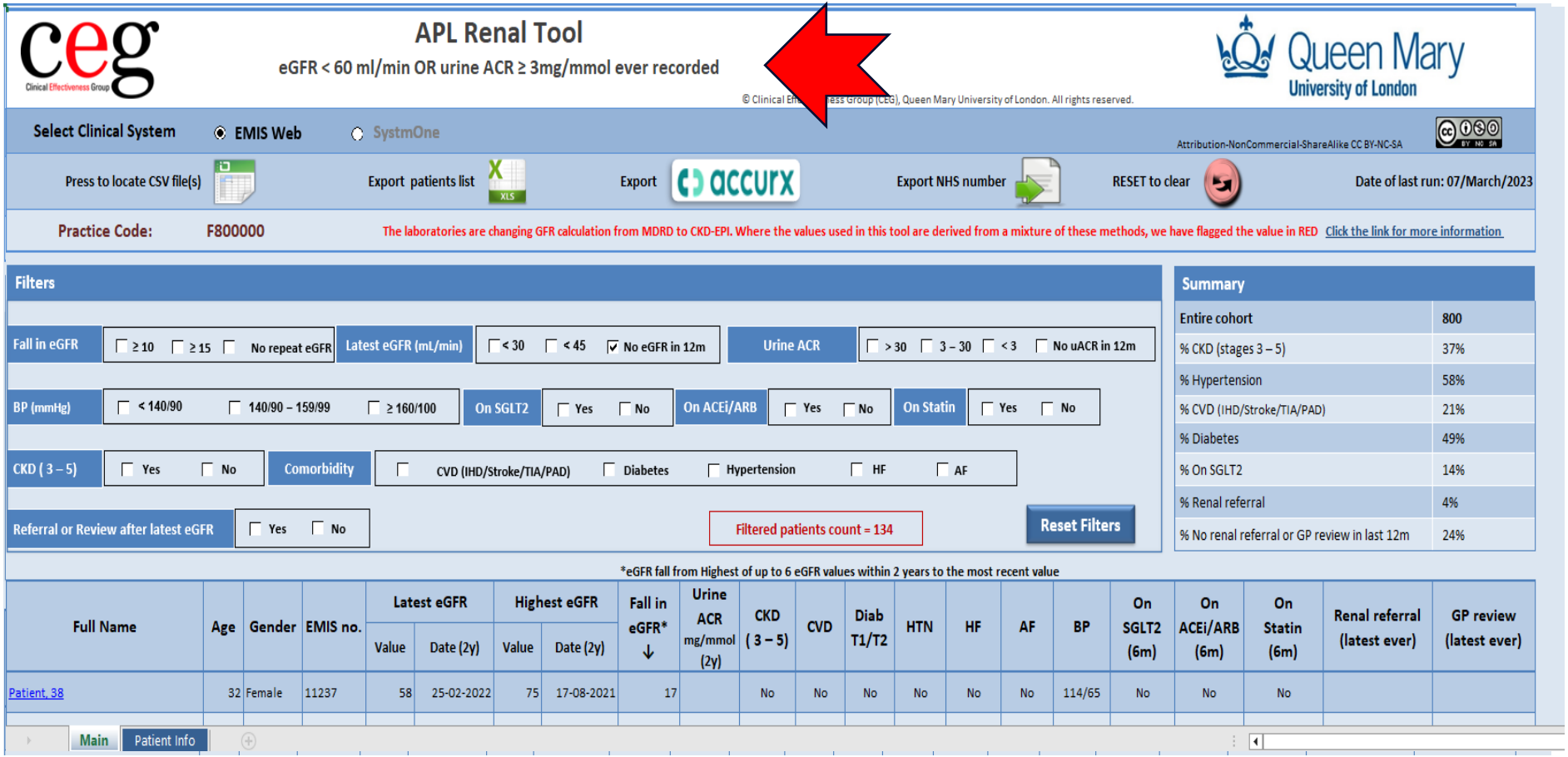
- Uncoded CKD
- Uncontrolled hypertension
- Missing ACRs
- Not on SGLT2 or ACE/ARB or statins

Virtual review page

- Summarises key information for any selected patient

Exports data

- Patient lists for AccuRx recall
- Individual patient review page for inclusion in referral



APL Renal Tool

eGFR < 60 ml/min OR urine ACR ≥ 3mg/mmol ever recorded

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Select Clinical System: EMIS Web | SystmOne

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Press to locate CSV file(s) | Export patients list | Export accurx | Export NHS number | RESET to clear | Date of last run: 07/March/2023

Practice Code: F800000

The laboratories are changing GFR calculation from MDRD to CKD-EPI. Where the values used in this tool are derived from a mixture of these methods, we have flagged the value in RED Click the link for more information

Filters

Fall in eGFR: ☐ ≥ 10 ☐ ≥ 15 ☐ No repeat eGFR

Latest eGFR (mL/min): ☐ < 30 ☐ < 45 ☑ No eGFR in 12m

Urine ACR: ☐ > 30 ☐ 3 – 30 ☐ < 3 ☐ No uACR in 12m

BP (mmHg): ☐ < 140/90 ☐ 140/90 – 159/99 ☐ ≥ 160/100

On SGLT2: ☐ Yes ☐ No

On ACEi/ARB: ☐ Yes ☐ No

On Statin: ☐ Yes ☐ No

CKD (3 – 5): ☐ Yes ☐ No

Comorbidity: ☐ CVD (IHD/Stroke/TIA/PAD) ☐ Diabetes ☐ Hypertension ☐ HF ☐ AF

Referral or Review after latest eGFR: ☐ Yes ☐ No

Filtered patients count = 134

Reset Filters

Summary

Entire cohort	800
% CKD (stages 3 – 5)	37%
% Hypertension	58%
% CVD (IHD/Stroke/TIA/PAD)	21%
% Diabetes	49%
% On SGLT2	14%
% Renal referral	4%
% No renal referral or GP review in last 12m	24%

*eGFR fall from Highest of up to 6 eGFR values within 2 years to the most recent value

Full Name	Age	Gender	EMIS no.	Latest eGFR		Highest eGFR		Fall in eGFR* ↓	Urine ACR mg/mmol (2y)	CKD (3 – 5)	CVD	Diab T1/T2	HTN	HF	AF	BP	On SGLT2 (6m)	On ACEi/ARB (6m)	On Statin (6m)	Renal referral (latest ever)	GP review (latest ever)
				Value	Date (2y)	Value	Date (2y)														
Patient, 38	32	Female	11237	58	25-02-2022	75	17-08-2021	17		No	No	No	No	No	No	114/65	No	No	No		

Main | Patient Info

APL Renal Tool

eGFR < 60 ml/min OR urine ACR ≥ 3mg/mmol ever recorded

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Patient, 38	32	Female	11237	58	25-02-2022	75	17-08-2021	17		No	No	No	No	No	No	114/65	No	No	No		

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On ACEi/ARB: ☐ Yes ☐ No

On Statin: ☐ Yes ☐ No

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Comorbidity: ☐ CVD (IHD/Stroke/TIA/PAD) ☐ Diabetes ☐ Hypertension ☐ HF ☐ AF

Referral or Review after latest eGFR: ☐ Yes ☐ No

Filtered patients count = 22

Reset Filters

Summary

Entire cohort	800
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				Value	Date (2y)	Value	Date (2y)														
Patient, 15	81	Male	11214	44	03-03-2023	69	27-05-2021	25		Yes	Yes	Yes	Yes	No	No	162/76	No	Yes	Yes		06-08-2019

BP (mmHg)	☐ < 140/90	☐ 140/90 – 159/99	☑ ≥ 160/100	On SGLT2	☐ Yes ☐ No	On ACEi/ARB	☐ Yes ☐ No	On Statin	☐ Yes ☐ No
CKD (3 – 5)	☑ Yes ☐ No	Comorbidity	☐ CVD (IHD/Stroke/TIA/PAD)	☐ Diabetes	☐ Hypertension	☐ HF	☐ AF		
Referral or Review after latest eGFR	☐ Yes ☐ No								

Filtered patients count = 22

Reset Filters

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				Value	Date (2y)	Value	Date (2y)														
Patient, 15	81	Male	11214	44	03-03-2023	69	27-05-2021	25		Yes	Yes	Yes	Yes	No	No	162/76	No	Yes	Yes		06-08-2019
Patient, 31	68	Female	11230	38	21-12-2022	56	14-09-2021	18	14.3	Yes	Yes	No	Yes	No	No	179/78	No	No	Yes		24-10-2018
Patient, 49	70	Female	11248	50	30-01-2023	64	23-06-2021	14	6.2	Yes	No	Yes	Yes	No	Yes	182/112	No	Yes	Yes		
Patient, 70	77	Male	11269	44	05-12-2022	56	17-06-2021	12	16.0	Yes	No	Yes	Yes	Yes	No	167/66	Yes	Yes	Yes	26-09-2019	
Patient, 196	85	Male	11395	38	26-05-2022	44	26-03-2021	6		Yes	Yes	No	Yes	No	No	175/67	No	No	Yes		19-05-2022
Patient, 213	85	Female	11412	62	02-03-2023	67	18-01-2023	5	49.2	Yes	Yes	Yes	Yes	No	No	224/85	No	Yes	Yes		
Patient, 240	65	Female	11439	52	28-12-2022	56	30-11-2022	4	17.8	Yes	No	No	Yes	No	No	163/101	No	Yes	Yes		
Patient, 288	83	Male	11487	27	06-02-2023	30	08-03-2021	3	66.6	Yes	No	Yes	Yes	No	No	166/73	No	No	Yes		
Patient, 304	68	Male	11503	38	09-09-2022	40	29-03-2022	2	13.6	Yes	Yes	Yes	Yes	No	No	160/63	Yes	Yes	Yes		07-07-2020
Patient, 347	43	Male	11546	3	24-10-2022	4	19-05-2022	1		Yes	No	No	Yes	No	No	161/103	No	Yes	No		

APL Renal Tool

eGFR < 60 ml/min OR urine ACR ≥ 3mg/mmol ever recorded

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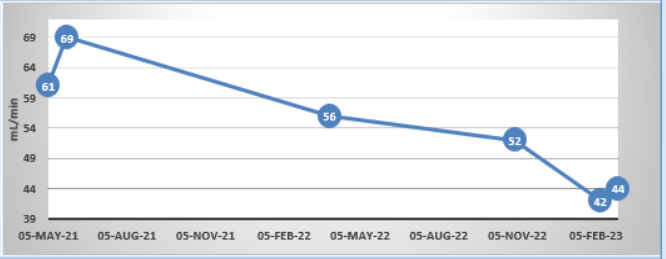
BACK

Patient Information

Full Name	Patient, 15	Gender	Male
Date of Birth	23/09/1942	Age	81
NHS Number	1111111124	Patient record #	11214
Ethnicity	Caribbean - ethnic category 2001 census		

The laboratories are changing GFR calculation from MDRD to CKD-EPI. Where the values used in this tool are derived from a mixture of these methods, we have flagged the highest and most recent eGFR values within 2 years in RED

eGFR value (mL/min)	Date Recorded (last 2y)
44	03-Mar-2023
42	10-Feb-2023
52	02-Nov-2022
56	30-Mar-2022
69	27-May-2021
61	05-May-2021



CKD coding	Code Description	Date Recorded
CKD stages 3 – 5	Chronic kidney disease stage 3	02-Mar-2023

Clinical data	Value	Date Recorded
Urine Albumin/Creatinine Ratio ACR (latest 2y)		
Systolic/Diastolic BP (latest)	162/76 mmHg	03-Mar-2023
QRisk score (latest)	26.2%	14-Aug-2014

Export Patient Info

This tool shows the correct CKD Classification stage based on age, sex, eGFR and Urine ACR and the patients risk of progression to end-stage disease.

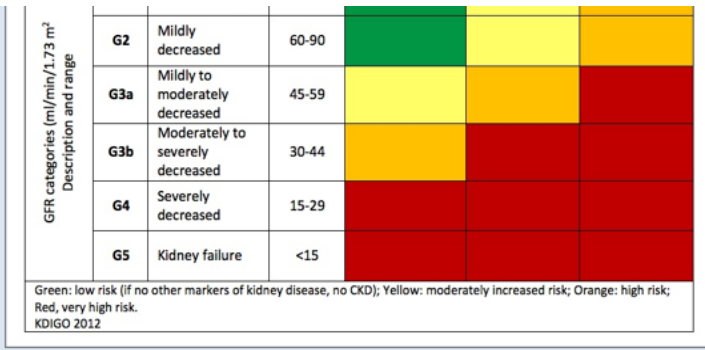
Prognosis of CKD by GFR and Albuminuria Categories

GFR categories (ml/min/1.73 m²) Description and range				Albuminuria categories Description and range		
				A1	A2	A3
				Normal to mildly increased	Moderately increased	Severely increased
				<30 mg/g <3 mg/mmol	30-299 mg/g 3-29 mg/mmol	≥300 mg/g ≥30 mg/mmol
	G1	Normal or high	≥90			
	G2	Mildly decreased	60-90			
	G3a	Mildly to moderately decreased	45-59			
	G3b	Moderately to severely decreased	30-44			
	G4	Severely decreased	15-29			
	G5	Kidney failure	<15			

Green: low risk (if no other markers of kidney disease, no CKD); Yellow: moderately increased risk; Orange: high risk; Red, very high risk.
KDIGO 2012

69	27-May-2021	
61	05-May-2021	

CKD coding		Code Description	Date Recorded
CKD stages 3 – 5		Chronic kidney disease stage 3	02-Mar-2023
Clinical data		**Value**	**Date Recorded**
Urine Albumin/Creatinine Ratio ACR (latest 2y)			
Systolic/Diastolic BP (latest)		162/76 mmHg	03-Mar-2023
QRisk score (latest)		26.2%	14-Aug-2014
Risk Factors		**Code Description**	**Date Recorded**
CVD (IHD/Stroke/TIA/PAD)		Coronary artery disease	19-Jan-2023
Hypertension		Essential hypertension	02-Mar-2023
Heart Failure			
Diabetes (T1/T2)		Type 2 diabetes mellitus	06-Feb-2023
AF			
Medications		**Dosage name**	**Date Recorded**
SGLT2 (6m)			
ACEi/ARB (6m)	Yes	Ramipril 5mg capsules	10-Feb-2023
Statin (6m)	Yes	Atorvastatin 80mg tablets	10-Feb-2023
Other Lipid Lowering Therapy (6m)			
Renal Referral		**Code Description**	**Date Recorded**
Referral Status (latest)			
GP Review		**Code Description**	**Date Recorded**
Renal/Medication review (latest)		Chronic kidney disease annual review	06-Aug-2019

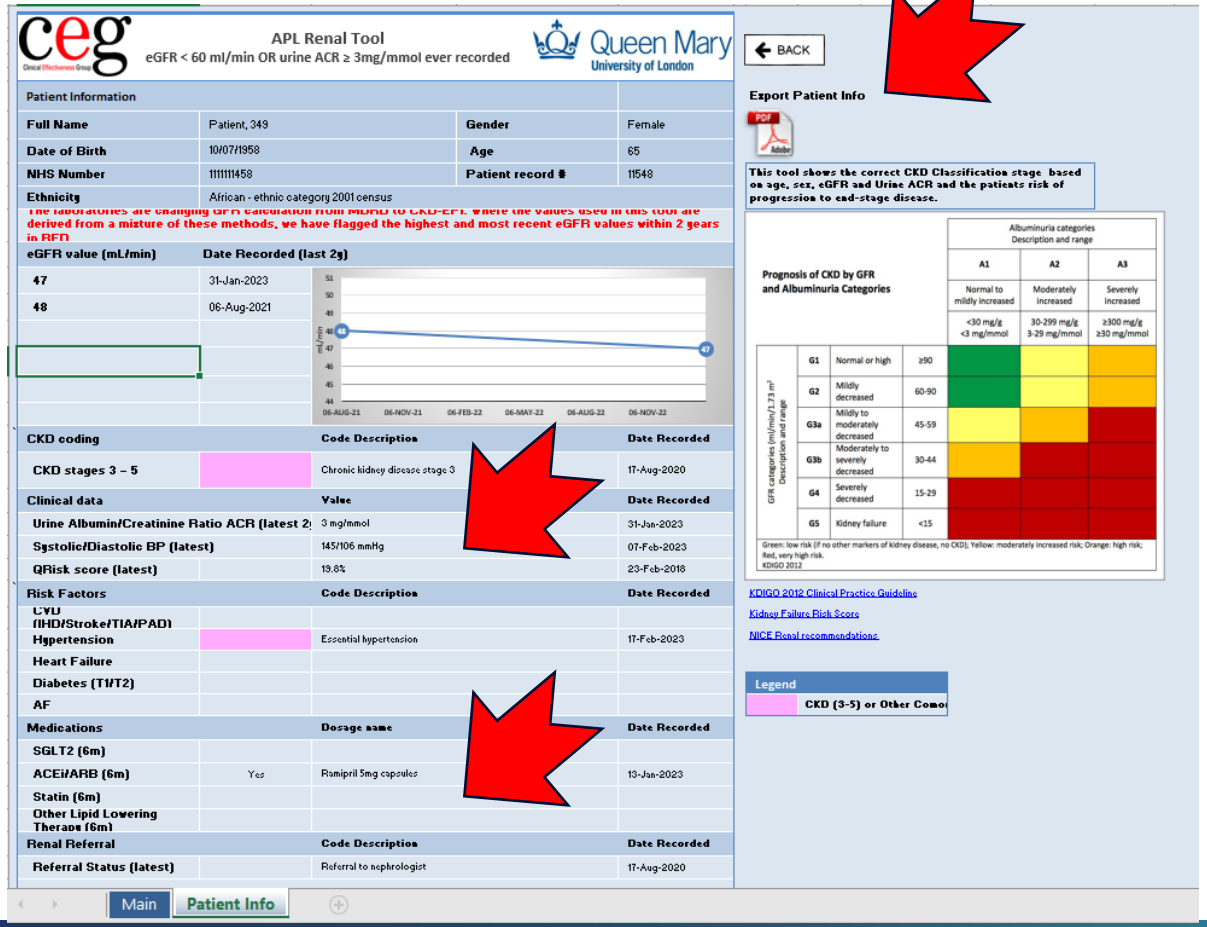


KDIGO 2012 Clinical Practice Guideline

Kidney Failure Risk Score

NICE Renal recommendations

Legend	
	CKD (3-5) or Other Comorbidity


APL Renal Tool
eGFR < 60 ml/min OR urine ACR ≥ 3mg/mmol ever recorded
Queen Mary University of London
Patient Information
Full Name
Patient, 349
Gender
Female
Date of Birth
10/07/1958
Age
65
NHS Number
1111111458
Patient record #
11548
Ethnicity
African - ethnic category 2001 census
The laboratories are changing GFR calculation from MDRD to CKD-EPI. Where the values used in this tool are derived from a mixture of these methods, we have flagged the highest and most recent eGFR values within 2 years in RED
eGFR value (mL/min)
Date Recorded (last 2)
47
31-Jan-2023
48
06-Aug-2021
CKD coding
Code Description
Date Recorded
CKD stages 3 – 5
Chronic kidney disease stage 3
17-Aug-2020
Clinical data
Value
Date Recorded
Urine Albumin/Creatinine Ratio ACR (latest 2
3 mg/mmol
31-Jan-2023
Systolic/Diastolic BP (latest)
145/106 mmHg
07-Feb-2023
QRisk score (latest)
13.8%
23-Feb-2018
Risk Factors
Code Description
Date Recorded
CVD (IHD/Stroke/TIA/PAD)
Hypertension
Essential hypertension
17-Feb-2023
Heart Failure
Diabetes (T1/T2)
AF
Medications
Dosage name
Date Recorded
SGLT2 (6m)
ACEi/ARB (6m)
Yes
Ramipril 5mg capsules
13-Jan-2023
Statin (6m)
Other Lipid Lowering Therapy (6m)
Renal Referral
Code Description
Date Recorded
Referral Status (latest)
Referral to nephrologist
17-Aug-2020
Main
Patient Info
BACK
Export Patient Info
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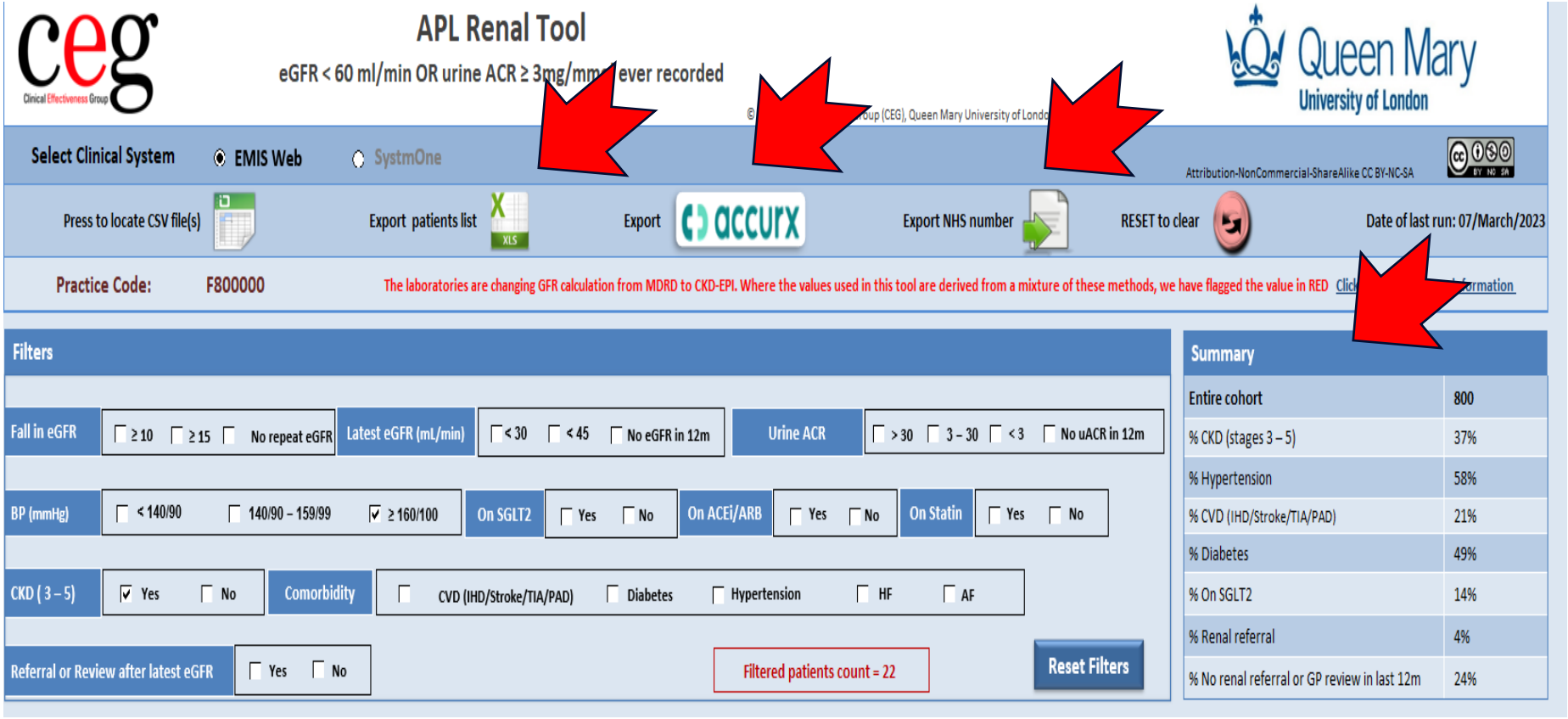
KDIGO 2012
KDIGO 2012 Clinical Practice Guideline
Kidney Failure Risk Score
NICE Renal recommendations
Legend
CKD (3-5) or Other Como


ceg
Clinical Effectiveness Group
APL Renal Tool
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Select Clinical System
EMIS Web
SystmOne
Attribution-NonCommercial-ShareAlike CC BY-NC-SA
Press to locate CSV file(s)
Export patients list
XLS
Export
accurx
Export NHS number
RESET to clear
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140/90 – 159/99
≥ 160/100
On SGLT2
Yes
No
On ACEi/ARB
Yes
No
On Statin
Yes
No
CKD (3 – 5)
Yes
No
Comorbidity
CVD (IHD/Stroke/TIA/PAD)
Diabetes
Hypertension
HF
AF
Referral or Review after latest eGFR
Yes
No
Filtered patients count = 22
Reset Filters
Summary
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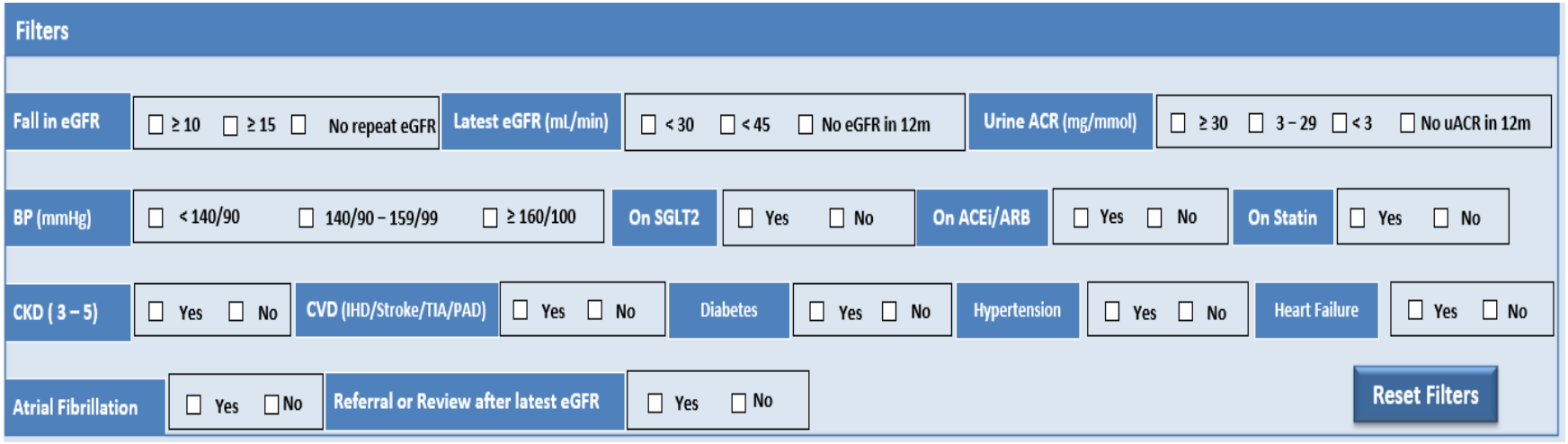
Latest APL-Renal tool

More flexible filters



What to do next

- Request the tool if you haven't already – link in chat
- Watch the demo video, read the user guide
- Use our LTC template (CKD page) to code activity correctly
- Get in touch if you need help downloading or using

(a few practices in BHR are on older versions of EMIS and require modified searches)

Who to contact

City & Hackney

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Queen Mary
University of London

Any questions?

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