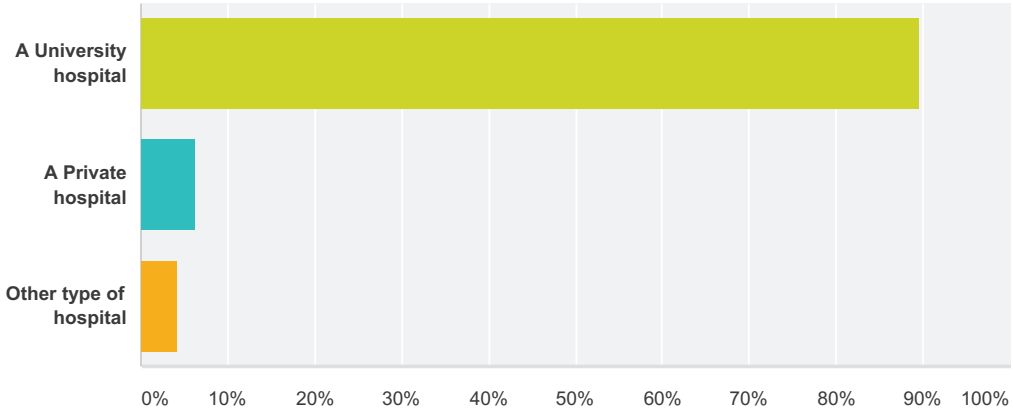
Q1 Is your institution:

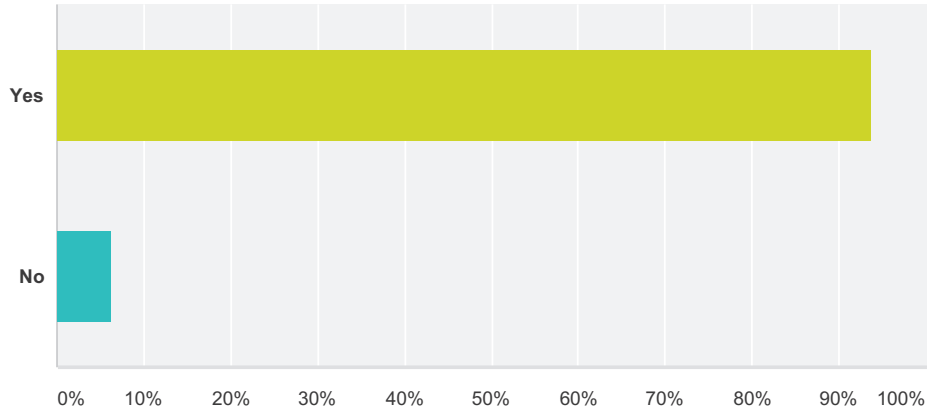
Answered: 48 Skipped: 0



Answer Choices	Responses	
A University hospital	**89.58%**	43
A Private hospital	**6.25%**	3
Other type of hospital	**4.17%**	2
Total		**48**

Q3 Would you be comfortable if we acknowledge your centre in the EP Europace Journal and on the Website?

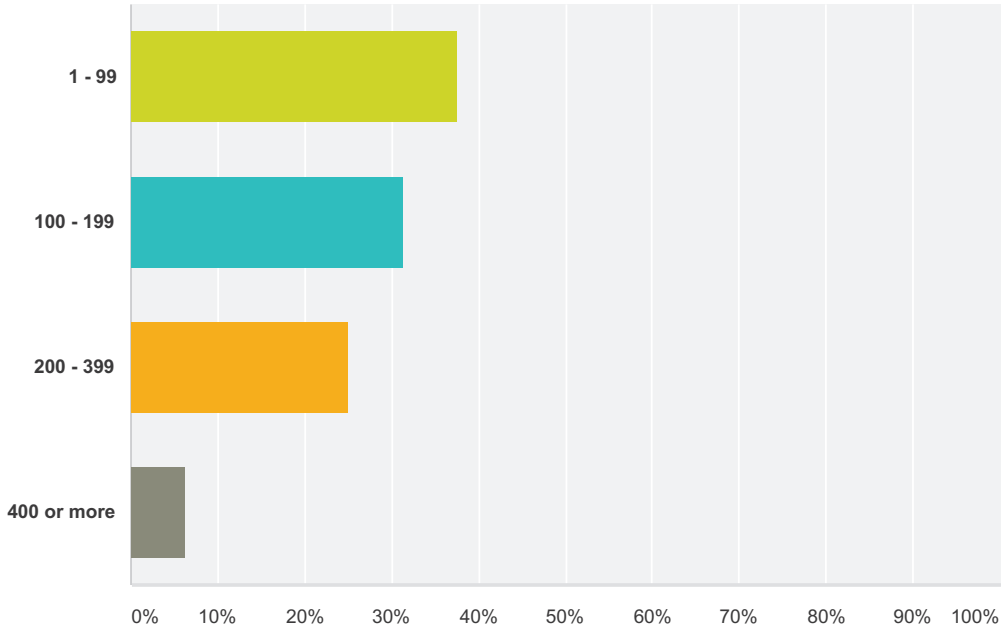
Answered: 48 Skipped: 0



Answer Choices	Responses	
Yes	**93.75%**	45
No	**6.25%**	3
Total		**48**

Q4 Total number of atrial fibrillation ablations at your institution last calender year:

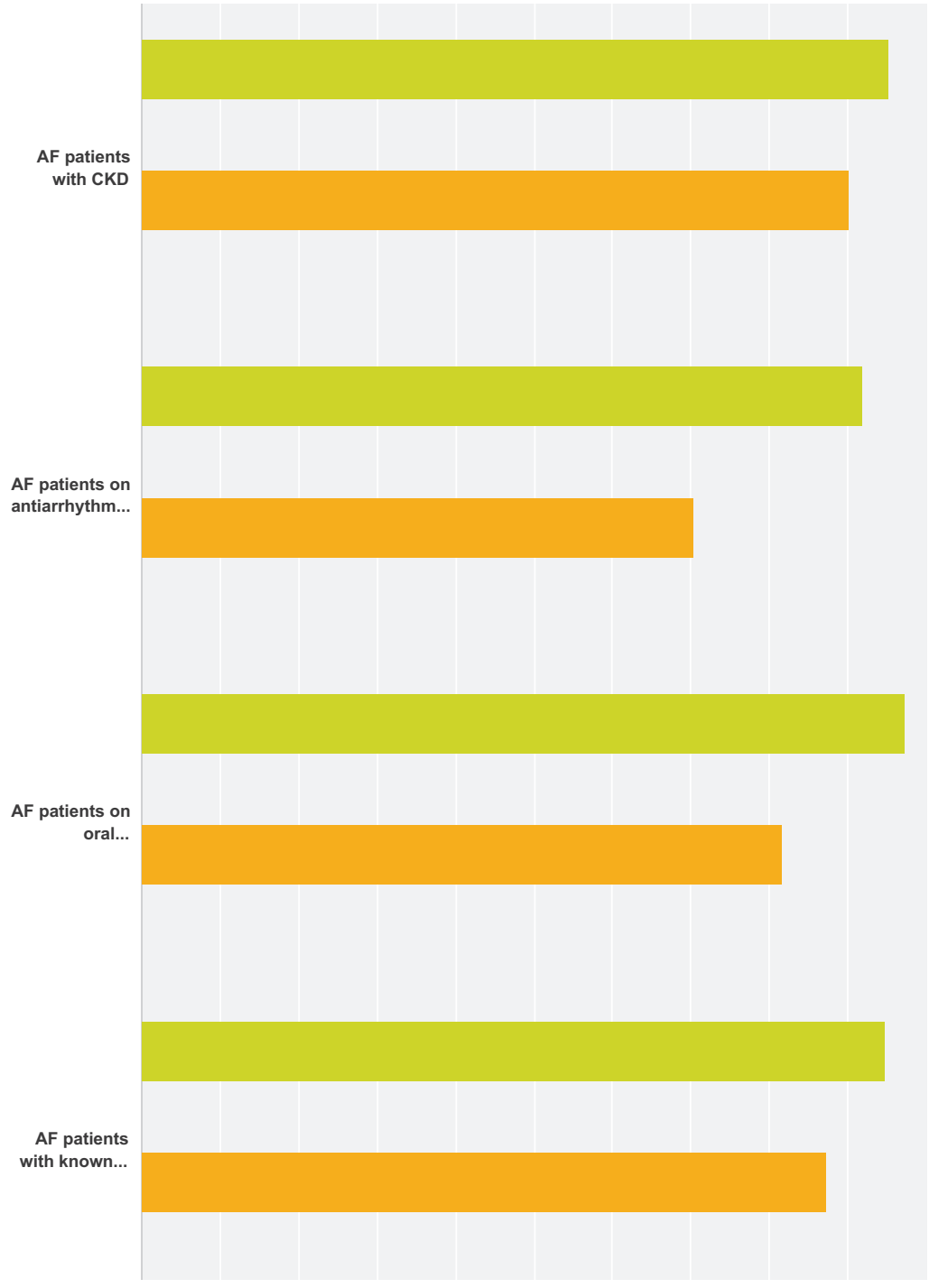
Answered: 48 Skipped: 0

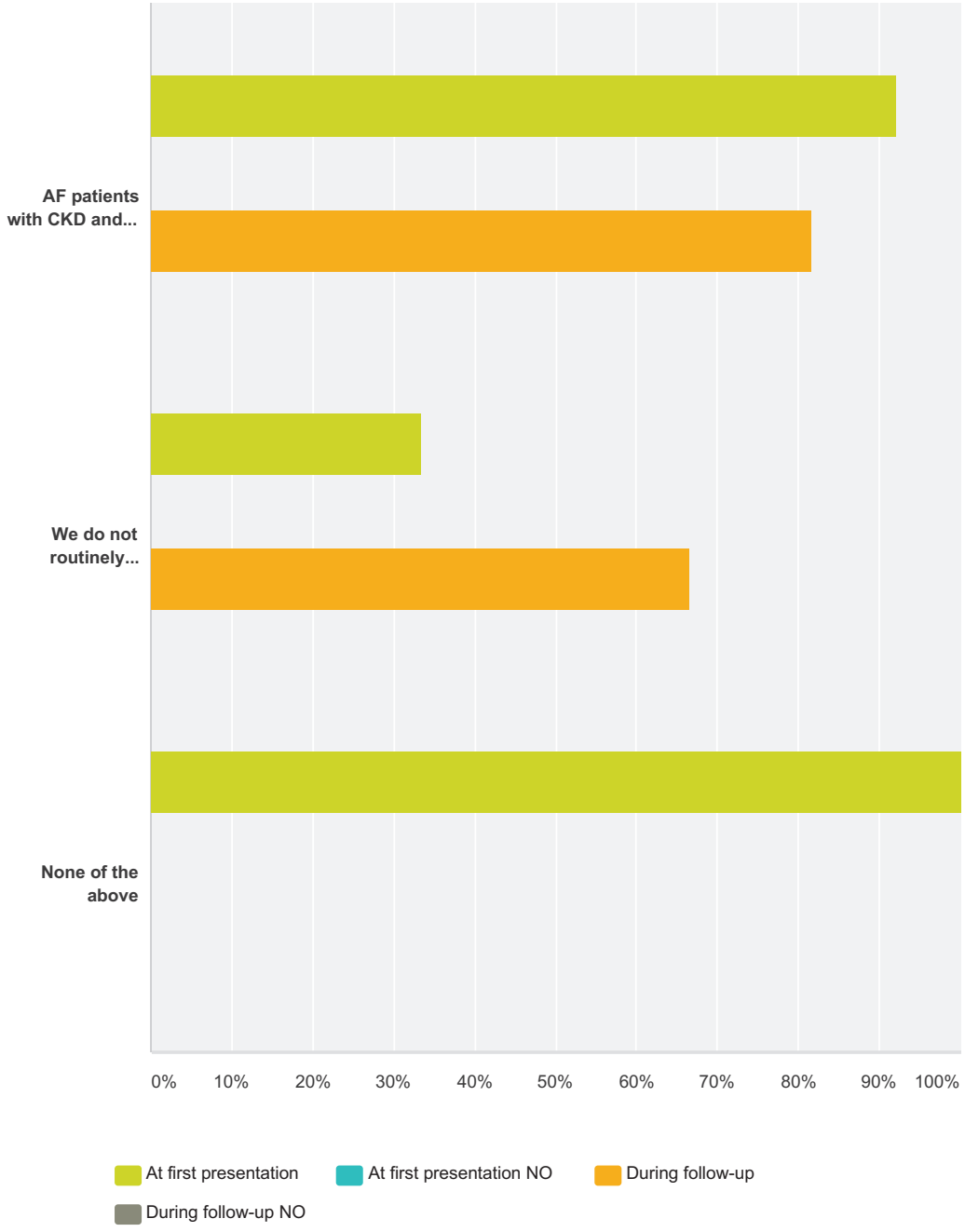


Answer Choices	Responses	
1 - 99	**37.50%**	18
100 - 199	**31.25%**	15
200 - 399	**25.00%**	12
400 or more	**6.25%**	3
Total		**48**

Q5 Regarding assessment of the presence and severity of chronic kidney disease (CKD) and monitoring of the development or progression of CKD, please, select all AF patient groups in whom renal function is routinely evaluated in your Centre: (Please, select all that apply for your Centre)

Answered: 41 Skipped: 7



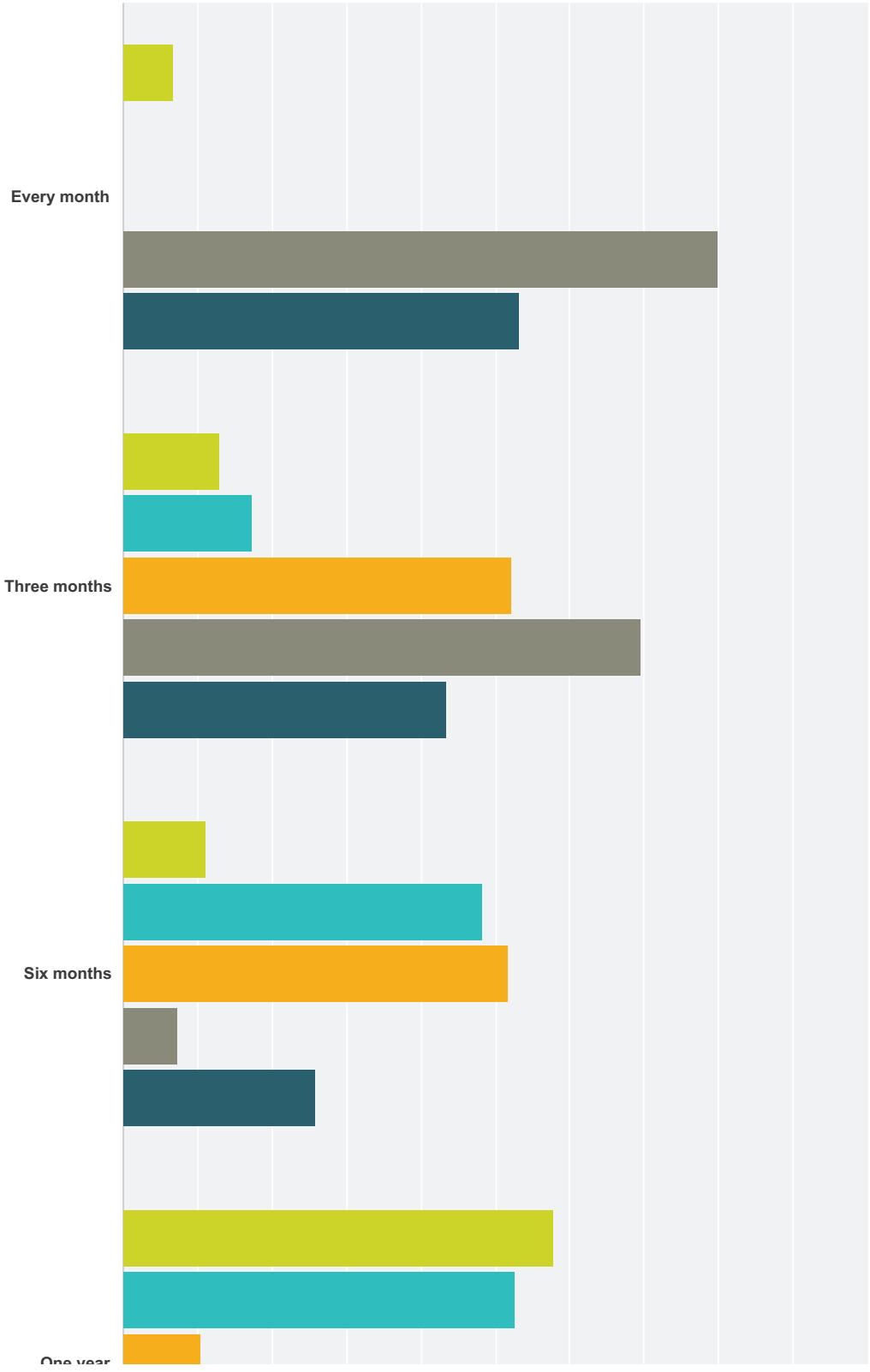


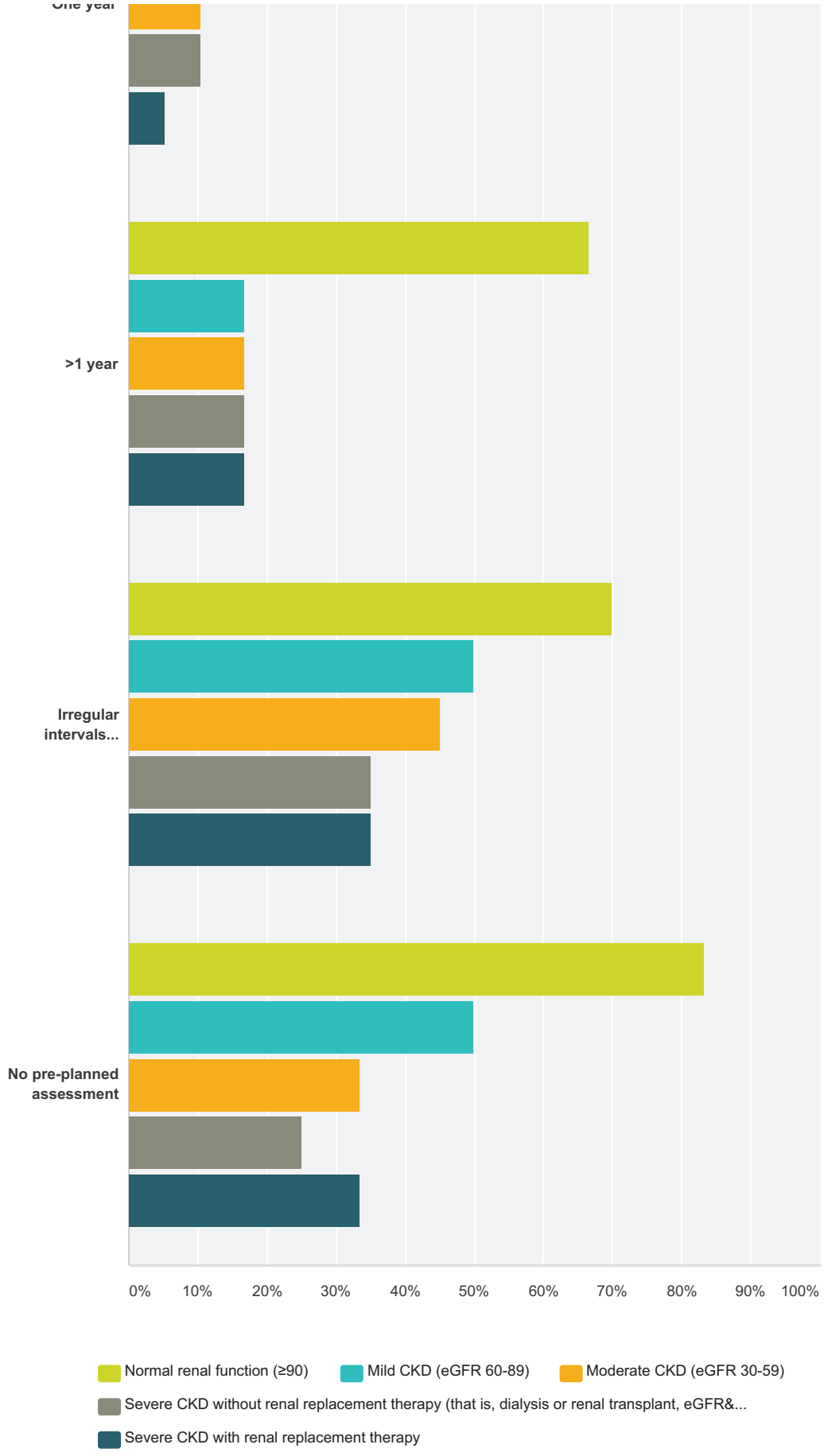
	At first presentation	At first presentation NO	During follow-up	During follow-up NO	Total Respondents
AF patients with CKD	**95.12%** 39	**0.00%** 0	**90.24%** 37	**0.00%** 0	41
AF patients on antiarrhythmic drug therapy (planned or ongoing)	**91.89%** 34	**0.00%** 0	**70.27%** 26	**0.00%** 0	37
AF patients on oral anticoagulant therapy (planned or ongoing)	**97.37%** 37	**0.00%** 0	**81.58%** 31	**0.00%** 0	38
AF patients with known history of any stage CKD	**94.87%** 37	**0.00%** 0	**87.18%** 34	**0.00%** 0	39
AF patients with CKD and renal replacement therapy (i.e., dialysis or renal transplant)	**92.11%** 35	**0.00%** 0	**81.58%** 31	**0.00%** 0	38

We do not routinely evaluate the presence and severity of CKD in patients with AF	**33.33%** 1	**0.00%** 0	**66.67%** 2	**0.00%** 0	3
None of the above	**100.00%** 1	**0.00%** 0	**0.00%** 0	**0.00%** 0	1

Q6 Does your Centre have pre-specified follow-up intervals for patients with AF depending on the presence and severity of CKD at presentation? (One answer per row)

Answered: 41 Skipped: 7

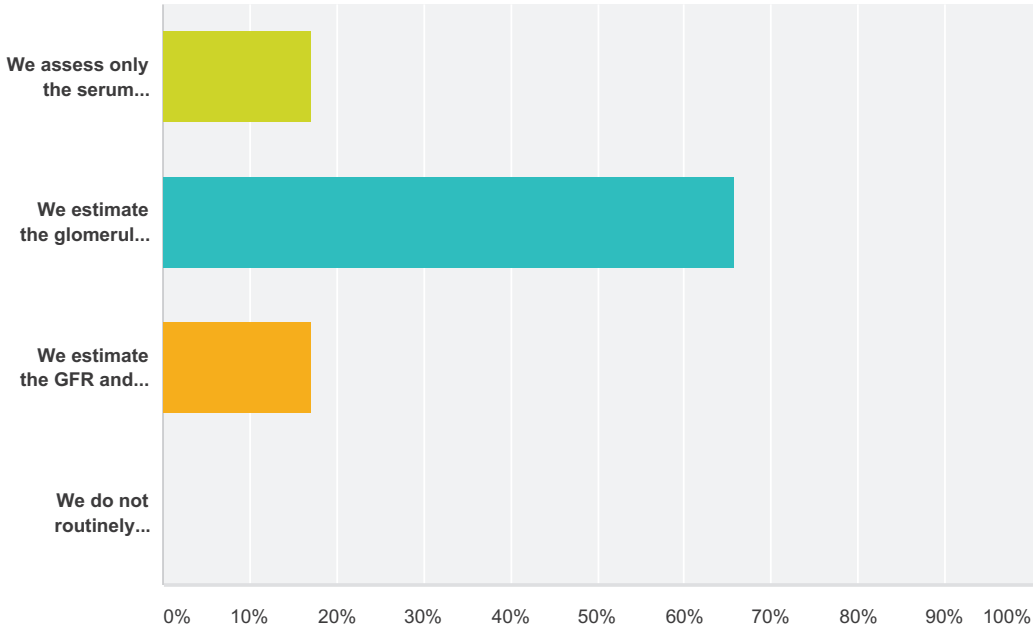



>1 year
Irregular intervals...
No pre-planned assessment
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Normal renal function (≥90)
Mild CKD (eGFR 60-89)
Moderate CKD (eGFR 30-59)
Severe CKD without renal replacement therapy (that is, dialysis or renal transplant, eGFR&...
Severe CKD with renal replacement therapy

	Normal renal function (≥90)	Mild CKD (eGFR 60-89)	Moderate CKD (eGFR 30-59)	Severe CKD without renal replacement therapy (that is, dialysis or renal transplant, eGFR<30)	Severe CKD with renal replacement therapy	Total Respondents
Every month	**6.67%** 1	**0.00%** 0	**0.00%** 0	**80.00%** 12	**53.33%** 8	15
Three months	**13.04%** 3	**17.39%** 4	**52.17%** 12	**69.57%** 16	**43.48%** 10	23
Six months	**11.11%** 3	**48.15%** 13	**51.85%** 14	**7.41%** 2	**25.93%** 7	27
One year	**57.89%** 11	**52.63%** 10	**10.53%** 2	**10.53%** 2	**5.26%** 1	19
>1 year	**66.67%** 4	**16.67%** 1	**16.67%** 1	**16.67%** 1	**16.67%** 1	6
Irregular intervals depending on the clinical presentation	**70.00%** 14	**50.00%** 10	**45.00%** 9	**35.00%** 7	**35.00%** 7	20
No pre-planned assessment	**83.33%** 10	**50.00%** 6	**33.33%** 4	**25.00%** 3	**33.33%** 4	12

Q7 What is the common practice in your Centre when evaluating the presence of CKD in patients with AF?

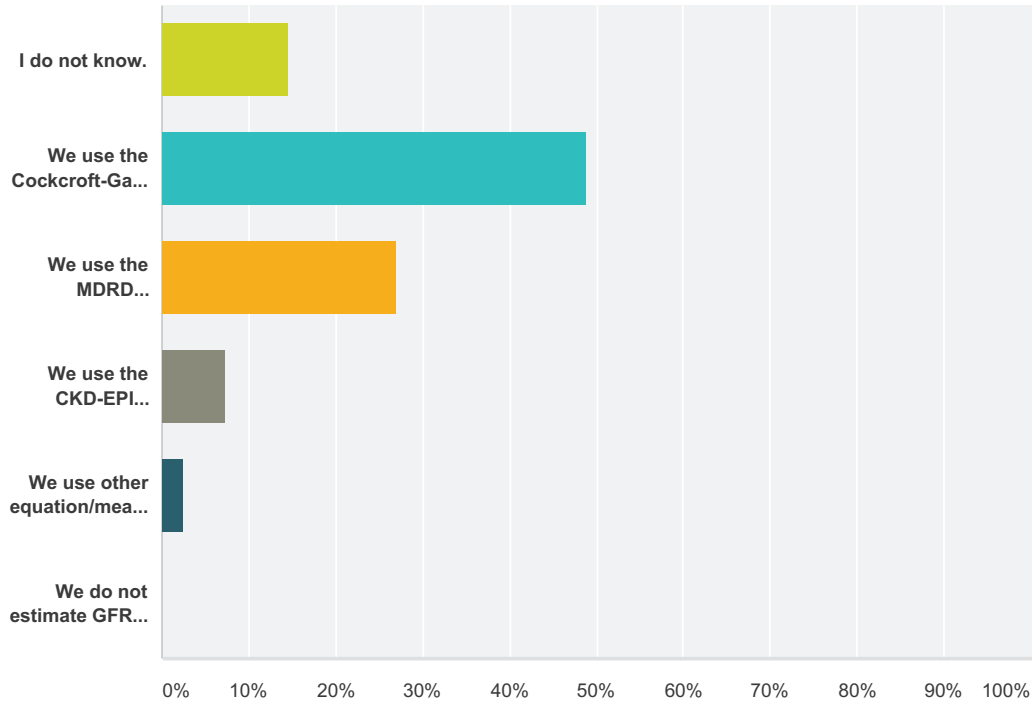
Answered: 41 Skipped: 7



Answer Choices	Responses	
We assess only the serum creatinine levels.	**17.07%**	7
We estimate the glomerular filtration rate (GFR).	**65.85%**	27
We estimate the GFR and measure albuminuria.	**17.07%**	7
We do not routinely evaluate the presence of CKD in our patients with cardiac arrhythmias.	**0.00%**	0
Total		**41**

Q8 Which equation is used for estimating the GFR in your Centre?

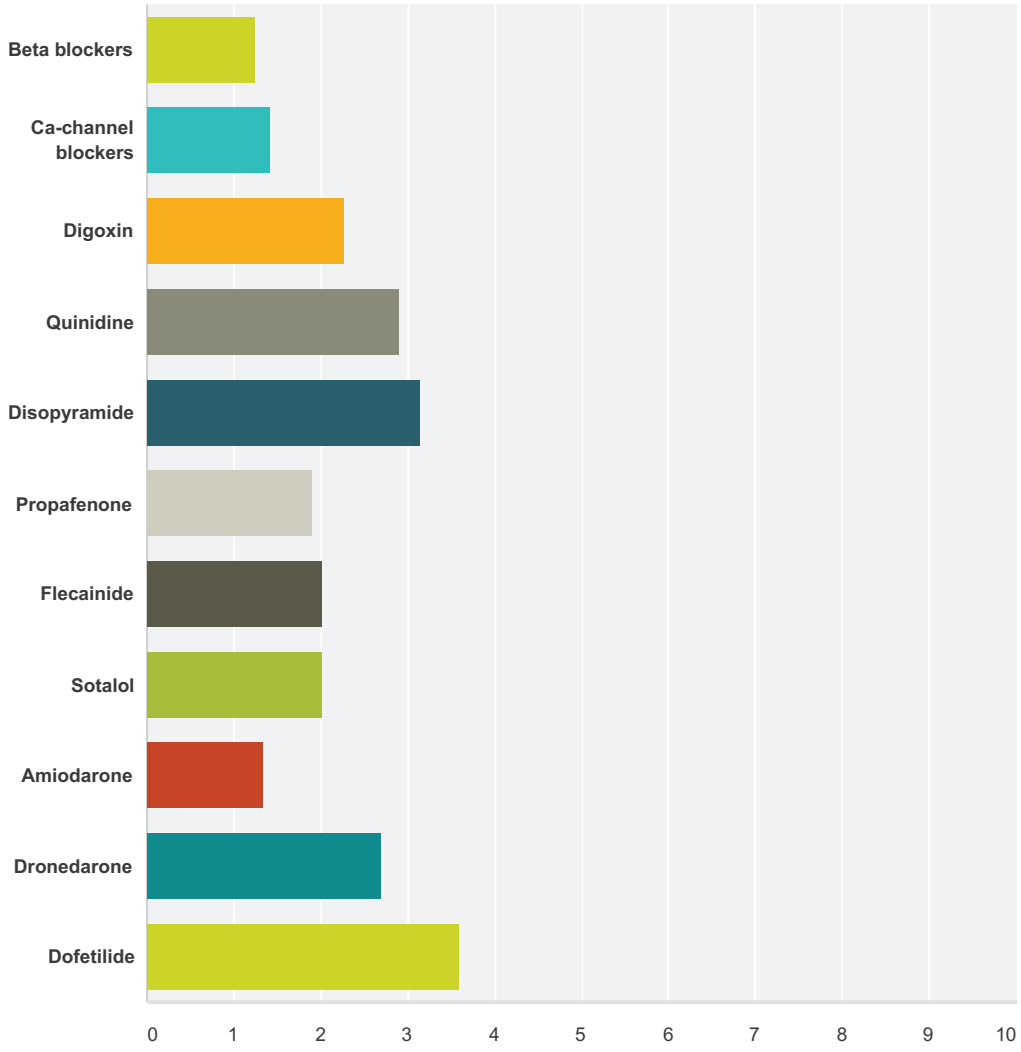
Answered: 41 Skipped: 7



Answer Choices	Responses	
I do not know.	**14.63%**	6
We use the Cockcroft-Gault equation.	**48.78%**	20
We use the MDRD (Modification of Diet in Renal Disease) equation.	**26.83%**	11
We use the CKD-EPI (Chronic Kidney Disease Epidemiology Collaboration) equation.	**7.32%**	3
We use other equation/measurement.	**2.44%**	1
We do not estimate GFR in my Centre.	**0.00%**	0
Total		**41**

Q9 How do you use following antiarrhythmic drugs in patients with CKD? (One answer per row)

Answered: 40 Skipped: 8

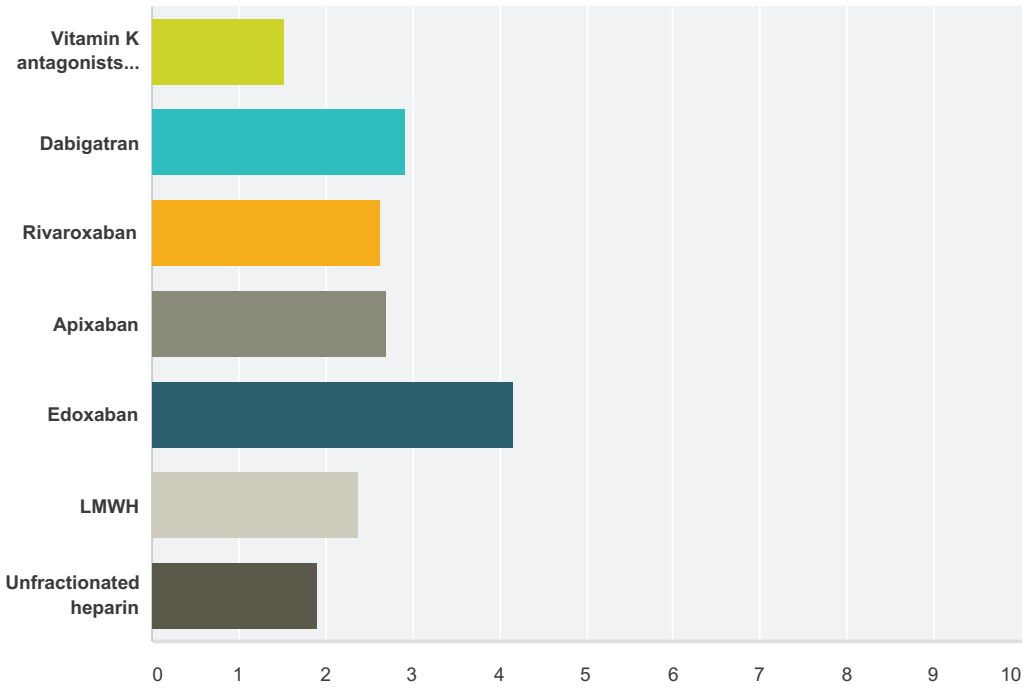


	No renal function -related dose adjustment	Caution in patients with moderate-to-severe renal dysfunction (e.g., dose reduction, altered dosing	I never use this drug in patients with severe renal dysfunction	I have no experience with this drug	Total	Weighted Average
Beta blockers	**75.00%** 30	**25.00%** 10	**0.00%** 0	**0.00%** 0	40	1.25
Ca-channel blockers	**61.54%** 24	**35.90%** 14	**2.56%** 1	**0.00%** 0	39	1.41
Digoxin	**2.50%** 1	**67.50%** 27	**30.00%** 12	**0.00%** 0	40	2.27
Quinidine	**12.82%** 5	**17.95%** 7	**35.90%** 14	**33.33%** 13	39	2.90
Disopyramide	**7.69%** 3	**15.38%** 6	**30.77%** 12	**46.15%** 18	39	3.15

Propafenone	**46.15%** 18	**25.64%** 10	**20.51%** 8	**7.69%** 3	39	1.90
Flecainide	**37.50%** 15	**30.00%** 12	**25.00%** 10	**7.50%** 3	40	2.02
Sotalol	**30.00%** 12	**37.50%** 15	**32.50%** 13	**0.00%** 0	40	2.02
Amiodarone	**69.23%** 27	**28.21%** 11	**2.56%** 1	**0.00%** 0	39	1.33
Dronedarone	**15.00%** 6	**25.00%** 10	**35.00%** 14	**25.00%** 10	40	2.70
Dofetilide	**2.50%** 1	**10.00%** 4	**12.50%** 5	**75.00%** 30	40	3.60

Q10 How do you use anticoagulant drugs in AF patients with CKD? (One answer per row)

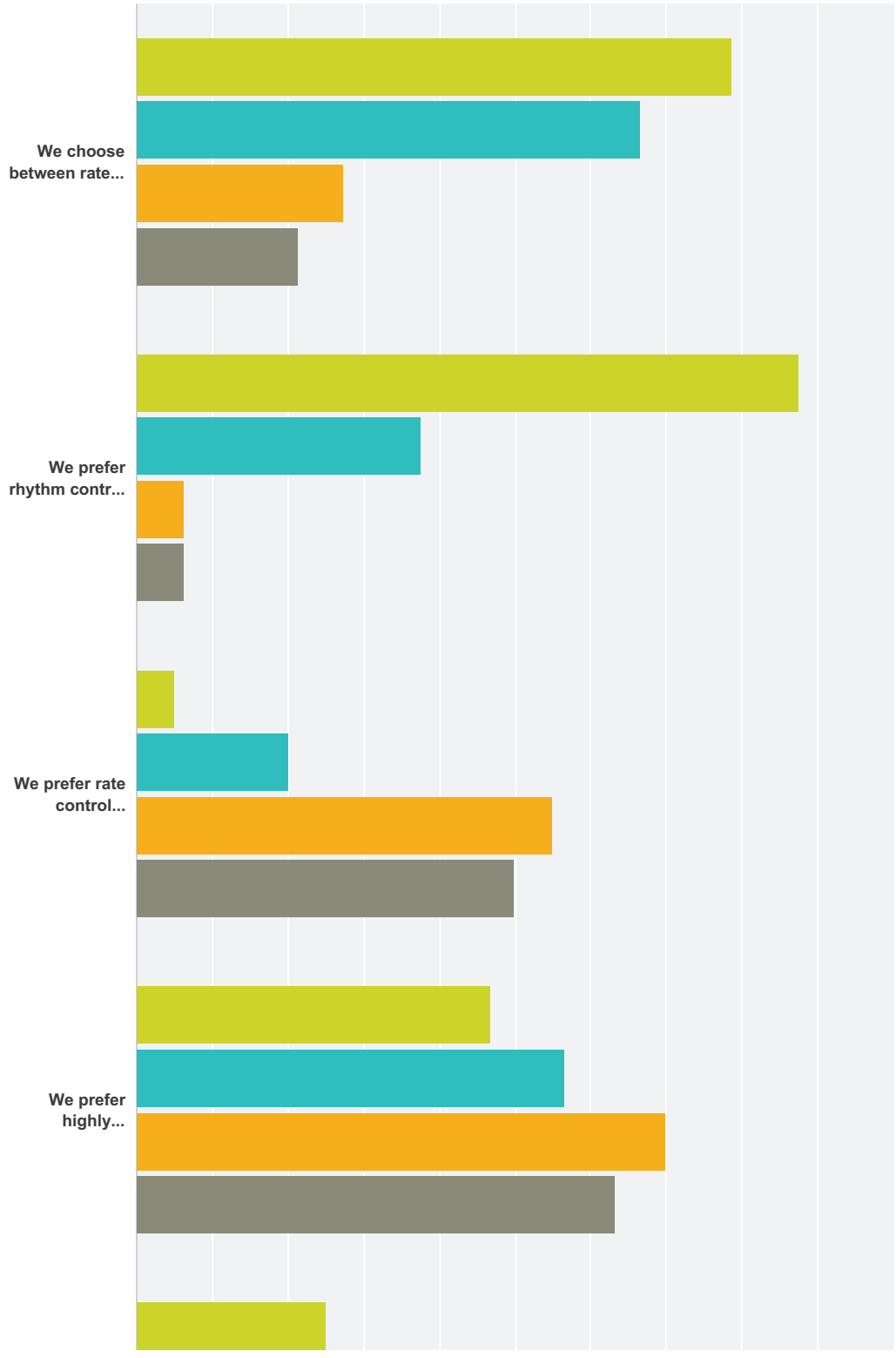
Answered: 40 Skipped: 8

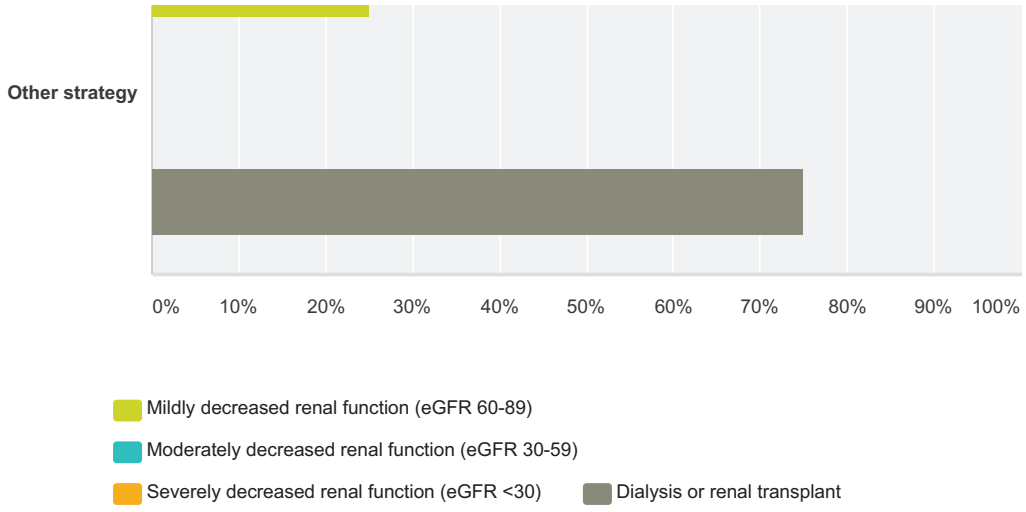


	No renal function - related dose adjustment	I use reduced/lower dose in moderate or severe renal dysfunction (eGFR <60)	I use reduced/lower dose only in severe renal dysfunction (eGFR <25-30)	I never use this drug in patients with severe renal dysfunction	I have no experience with this drug	Total	Weighted Average
Vitamin K antagonists (VKA)	**62.50%** 25	**22.50%** 9	**15.00%** 6	**0.00%** 0	**0.00%** 0	40	1.52
Dabigatran	**5.00%** 2	**45.00%** 18	**5.00%** 2	**42.50%** 17	**2.50%** 1	40	2.92
Rivaroxaban	**0.00%** 0	**60.00%** 24	**20.00%** 8	**17.50%** 7	**2.50%** 1	40	2.63
Apixaban	**2.50%** 1	**47.50%** 19	**32.50%** 13	**12.50%** 5	**5.00%** 2	40	2.70
Edoxaban	**0.00%** 0	**17.50%** 7	**10.00%** 4	**12.50%** 5	**60.00%** 24	40	4.15
LMWH	**12.50%** 5	**52.50%** 21	**25.00%** 10	**5.00%** 2	**5.00%** 2	40	2.38
Unfractionated heparin	**52.50%** 21	**27.50%** 11	**7.50%** 3	**2.50%** 1	**10.00%** 4	40	1.90

Q11 What is the common practice in your Centre for symptom reduction in patients with AF and CKD, according to the severity of renal dysfunction? (Please, select one treatment strategy per each CKD category)

Answered: 40 Skipped: 8

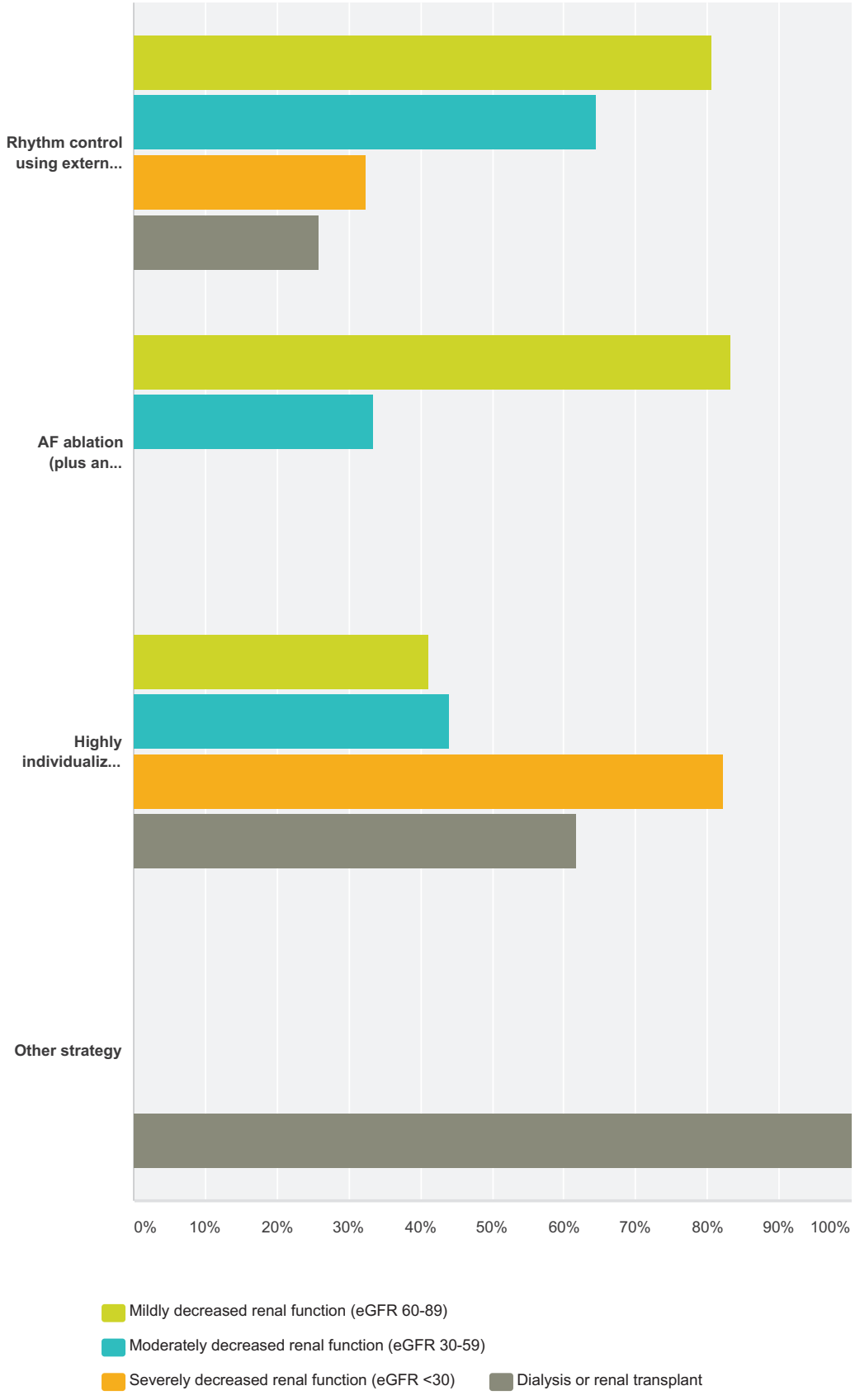




	Mildly decreased renal function (eGFR 60-89)	Moderately decreased renal function (eGFR 30-59)	Severely decreased renal function (eGFR <30)	Dialysis or renal transplant	Total Respondents
We choose between rate and rhythm control the same way as in patients without CKD	**78.79%** 26	**66.67%** 22	**27.27%** 9	**21.21%** 7	33
We prefer rhythm control strategy in CKD patients	**87.50%** 14	**37.50%** 6	**6.25%** 1	**6.25%** 1	16
We prefer rate control strategy in CKD patients	**5.00%** 1	**20.00%** 4	**55.00%** 11	**50.00%** 10	20
We prefer highly individualized decision-making with active, informed patient participation in the choice of either rhythm or rate control	**46.67%** 14	**56.67%** 17	**70.00%** 21	**63.33%** 19	30
Other strategy	**25.00%** 1	**0.00%** 0	**0.00%** 0	**75.00%** 3	4

Q12 When you choose rhythm control strategy, which approach is usually taken as the first-line therapy in your Centre? (Please, select one treatment strategy per each CKD category)

Answered: 40 Skipped: 8

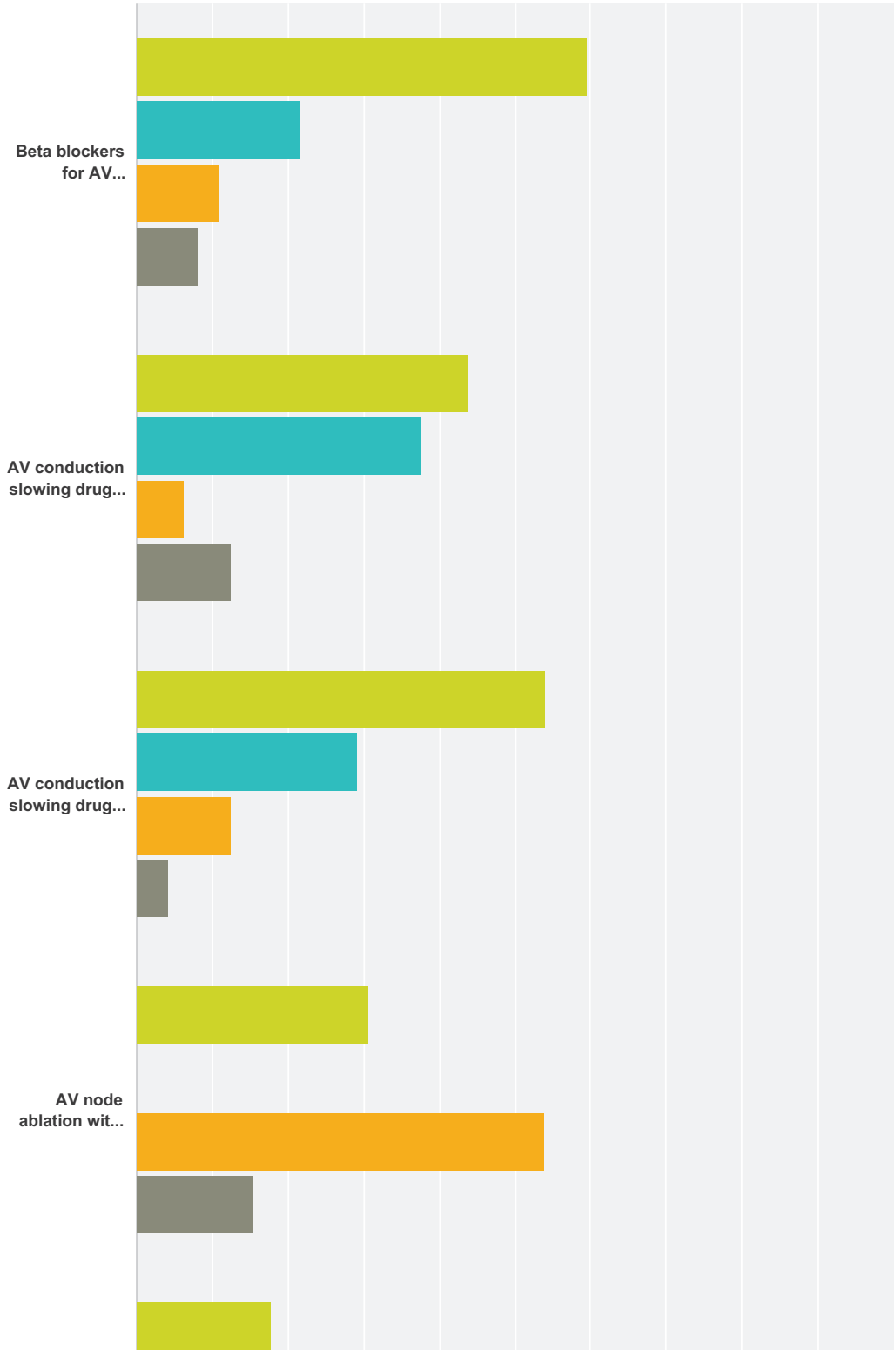


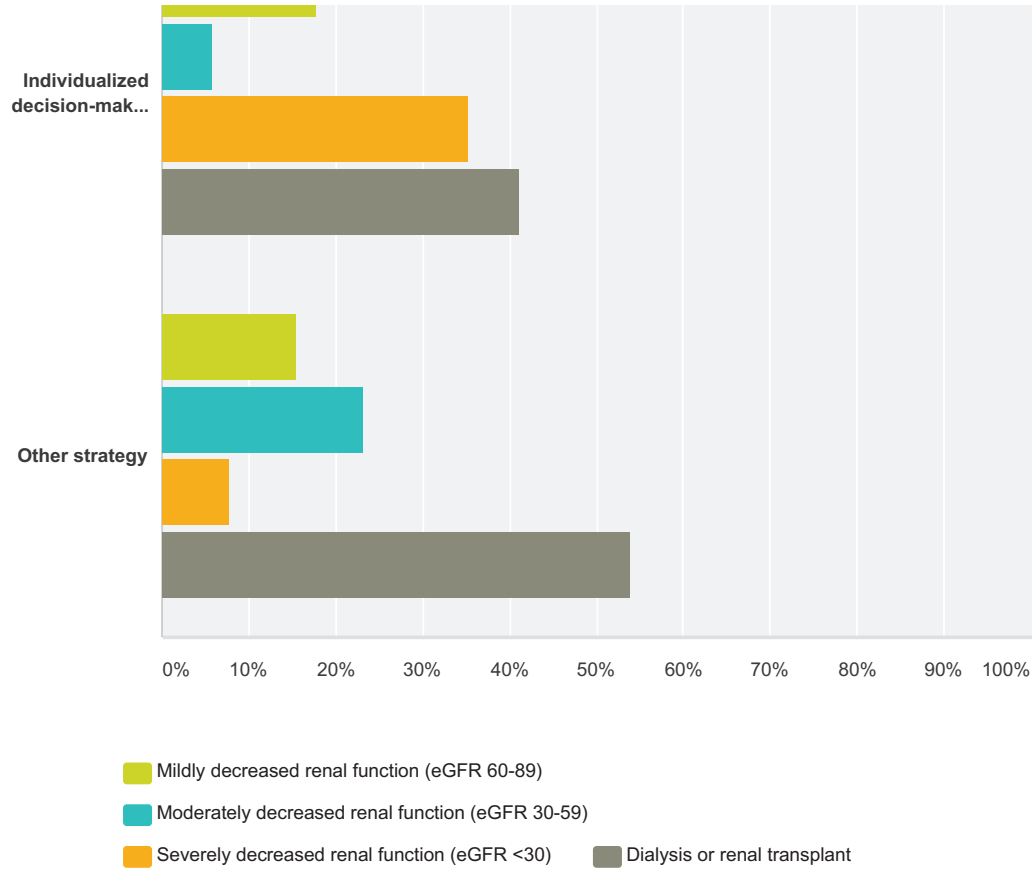
	Mildly decreased renal function (eGFR 60-89)	Moderately decreased renal function (eGFR 30-59)	Severely decreased renal function (eGFR <30)	Dialysis or renal transplant	Total Respondents

Rhythm control using external DC cardioversion to restore sinus rhythm and/or an antiarrhythmic drug to prevent AF recurrence	**80.65%** 25	**64.52%** 20	**32.26%** 10	**25.81%** 8	31
AF ablation (plus an antiarrhythmic drug to prevent AF recurrence if needed)	**83.33%** 15	**33.33%** 6	**0.00%** 0	**0.00%** 0	18
Highly individualized decision-making with active, informed patient participation in the choice of either antiarrhythmic drugs/DC cardioversion or AF ablation	**41.18%** 14	**44.12%** 15	**82.35%** 28	**61.76%** 21	34
Other strategy	**0.00%** 0	**0.00%** 0	**0.00%** 0	**100.00%** 4	4

Q13 When you choose rate control strategy, which approach is usually taken as the first-line therapy for rate control in your Centre? (Please, select one treatment strategy per each CKD category)

Answered: 40 Skipped: 8

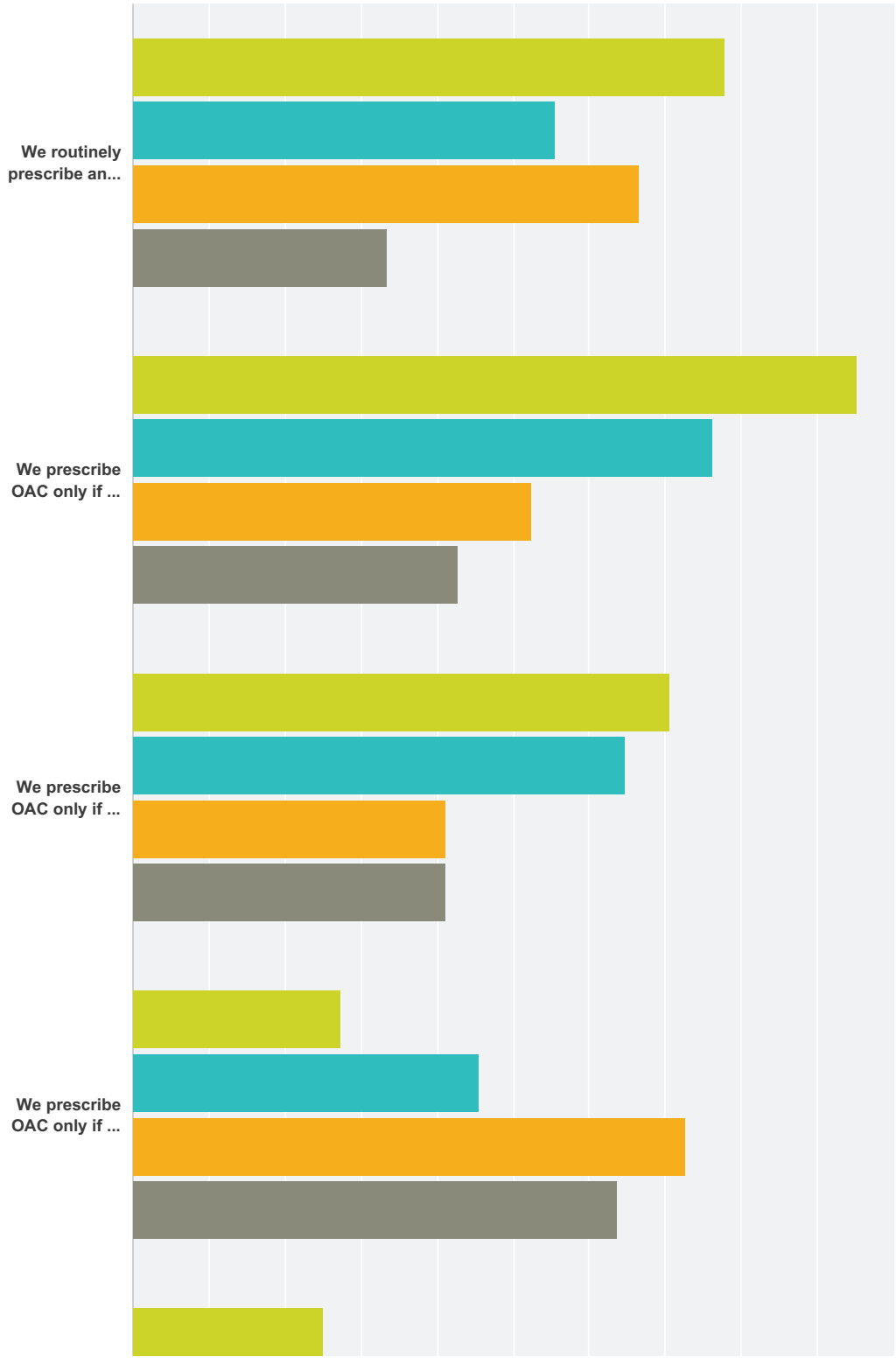


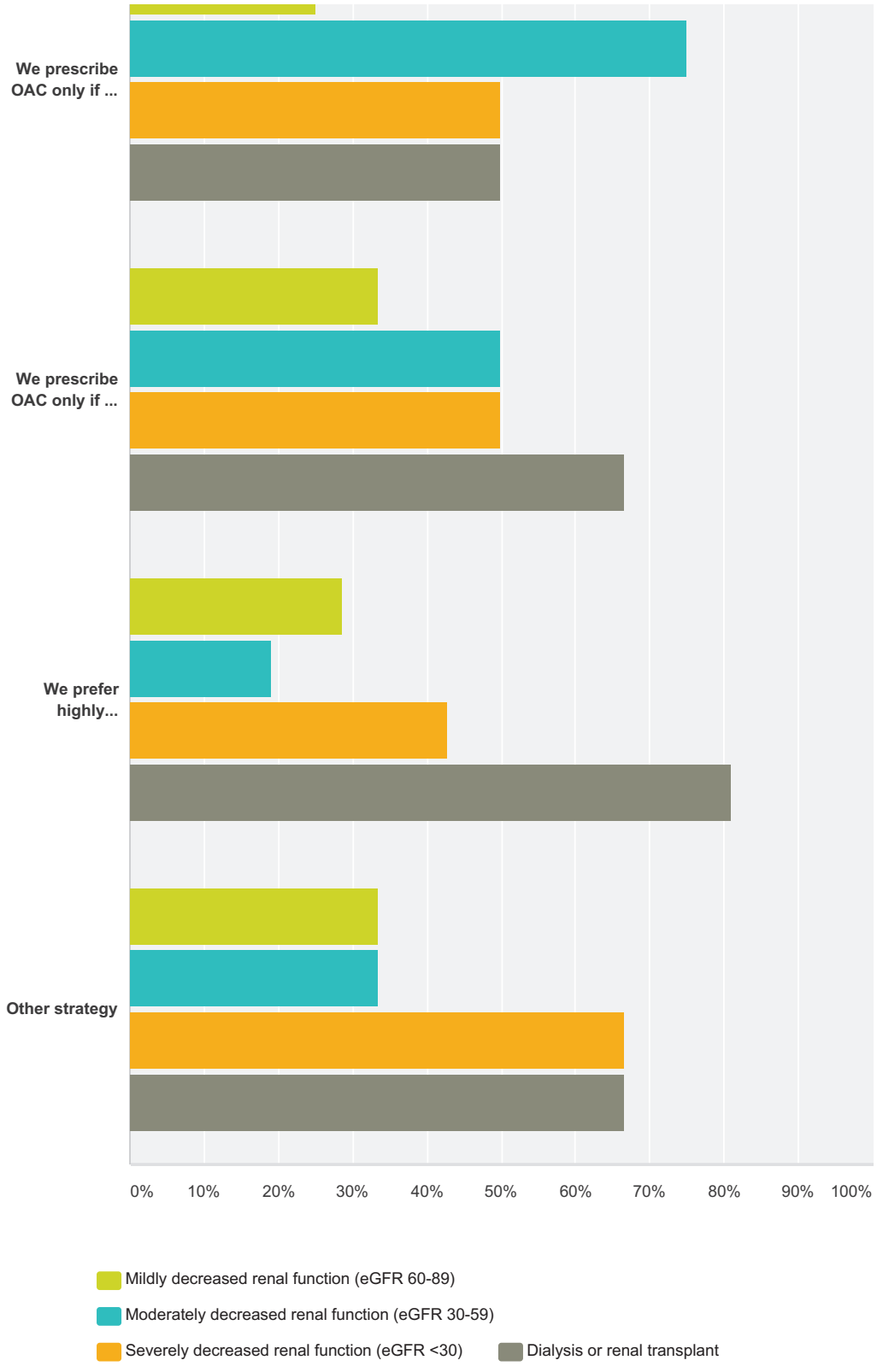


	Mildly decreased renal function (eGFR 60-89)	Moderately decreased renal function (eGFR 30-59)	Severely decreased renal function (eGFR <30)	Dialysis or renal transplant	Total
Beta blockers for AV conduction slowing	**59.46%** 22	**21.62%** 8	**10.81%** 4	**8.11%** 3	37
AV conduction slowing drugs other than beta blockers	**43.75%** 7	**37.50%** 6	**6.25%** 1	**12.50%** 2	16
AV conduction slowing drugs without particular preference for a specific drug category	**54.17%** 13	**29.17%** 7	**12.50%** 3	**4.17%** 1	24
AV node ablation with permanent pacemaker implantation	**30.77%** 4	**0.00%** 0	**53.85%** 7	**15.38%** 2	13
Individualized decision-making with active, informed patient participation in the choice of the means of rate control	**17.65%** 6	**5.88%** 2	**35.29%** 12	**41.18%** 14	34
Other strategy	**15.38%** 2	**23.08%** 3	**7.69%** 1	**53.85%** 7	13

Q14 What is the common practice in your Centre for stroke prevention in patients with AF and CKD, according to the severity of renal dysfunction? (Please, select one treatment strategy per each CKD category)

Answered: 38 Skipped: 10



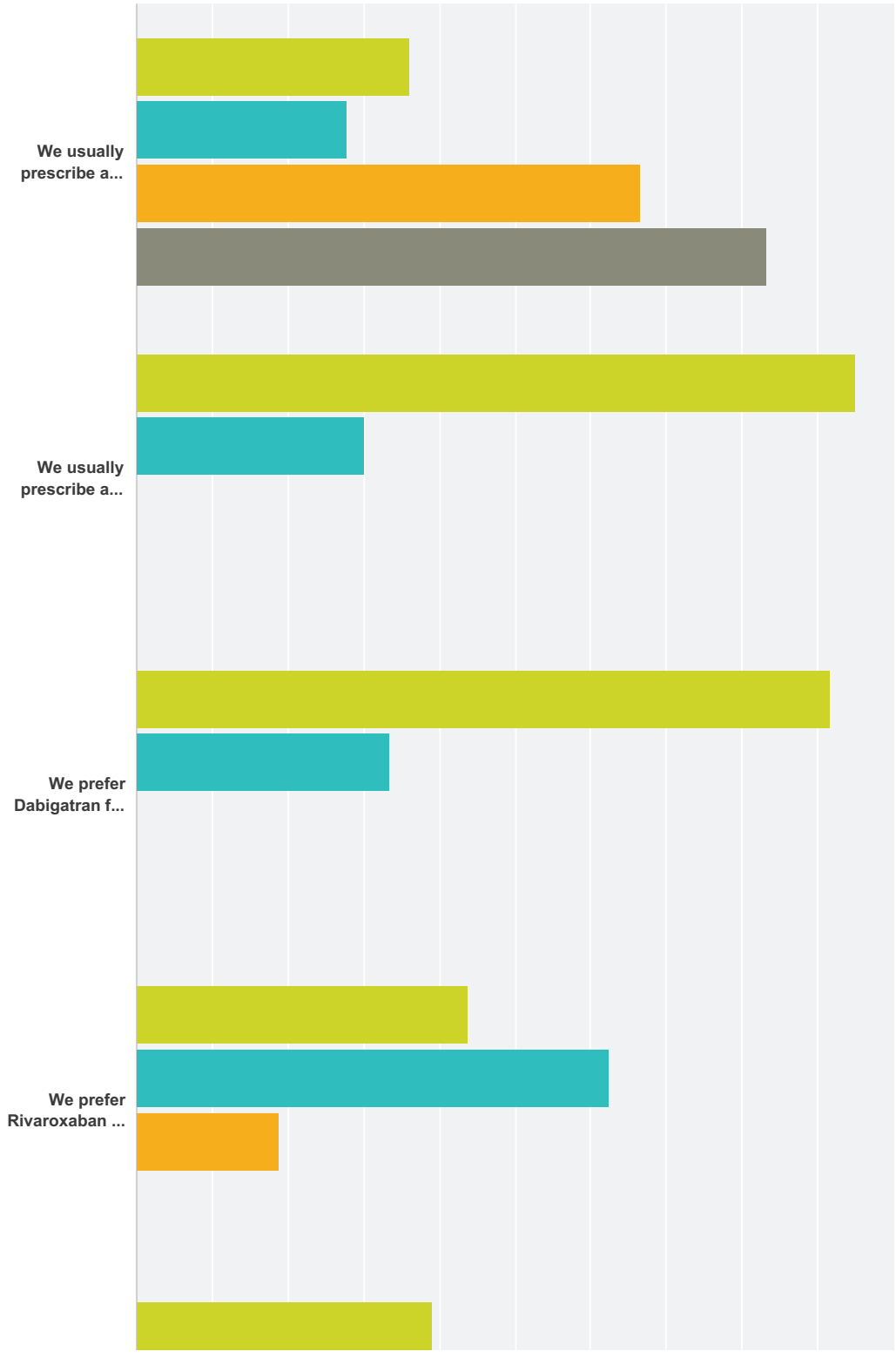


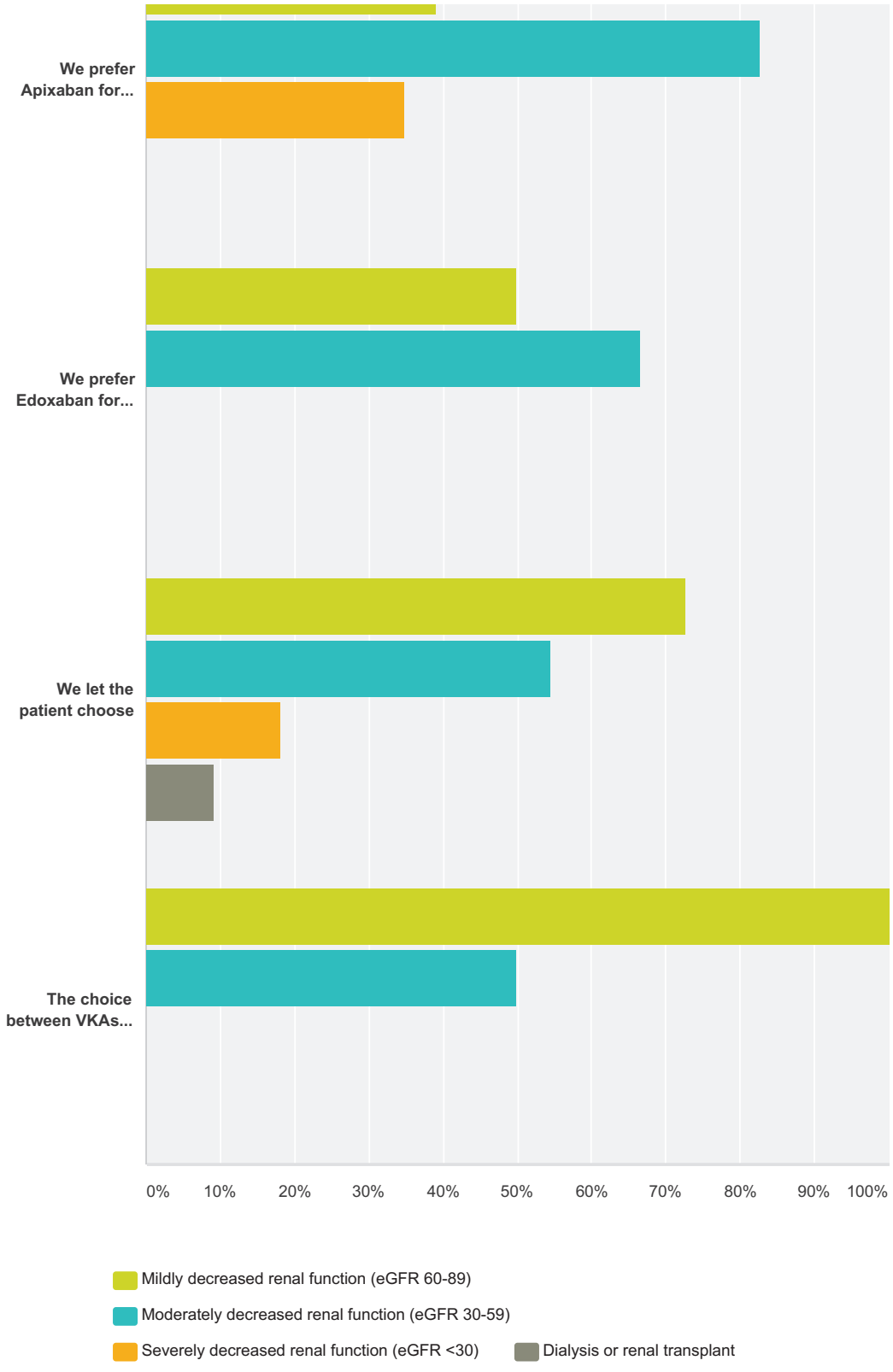
	Mildly decreased renal function (eGFR 60-89)	Moderately decreased renal function (eGFR 30-59)	Severely decreased renal function (eGFR <30)	Dialysis or renal transplant	Total Respondents
We routinely prescribe an oral anticoagulant (OAC).	**77.78%** 7	**55.56%** 5	**66.67%** 6	**33.33%** 3	9

We prescribe OAC only if the CHA2DS2-VASc score is ≥1	**95.24%** 20	**76.19%** 16	**52.38%** 11	**42.86%** 9	21
We prescribe OAC only if the CHA2DS2-VASc score is ≥2	**70.59%** 12	**64.71%** 11	**41.18%** 7	**41.18%** 7	17
We prescribe OAC only if the risk of bleeding is acceptable (e.g., a HASBLED score of ≤2), whilst in CKD patients with a HASBLED of ≥3 we use no antithrombotic therapy	**27.27%** 3	**45.45%** 5	**72.73%** 8	**63.64%** 7	11
We prescribe OAC only if the risk of bleeding is acceptable, whilst in CKD patients with a HASBLED of ≥3 we use aspirin	**25.00%** 1	**75.00%** 3	**50.00%** 2	**50.00%** 2	4
We prescribe OAC only if the risk of bleeding is acceptable, whilst in patients with a HASBLED of ≥3 we perform the left atrial appendage occlusion	**33.33%** 2	**50.00%** 3	**50.00%** 3	**66.67%** 4	6
We prefer highly individualized decision-making with active, informed patient participation in the choice of thromboprophylactic strategy	**28.57%** 6	**19.05%** 4	**42.86%** 9	**80.95%** 17	21
Other strategy	**33.33%** 1	**33.33%** 1	**66.67%** 2	**66.67%** 2	3

Q15 When you use oral anticoagulant therapy in AF patients with CKD, which agent(s) do you commonly use in specific CKD stages? (Please select one answer per column)

Answered: 38 Skipped: 10



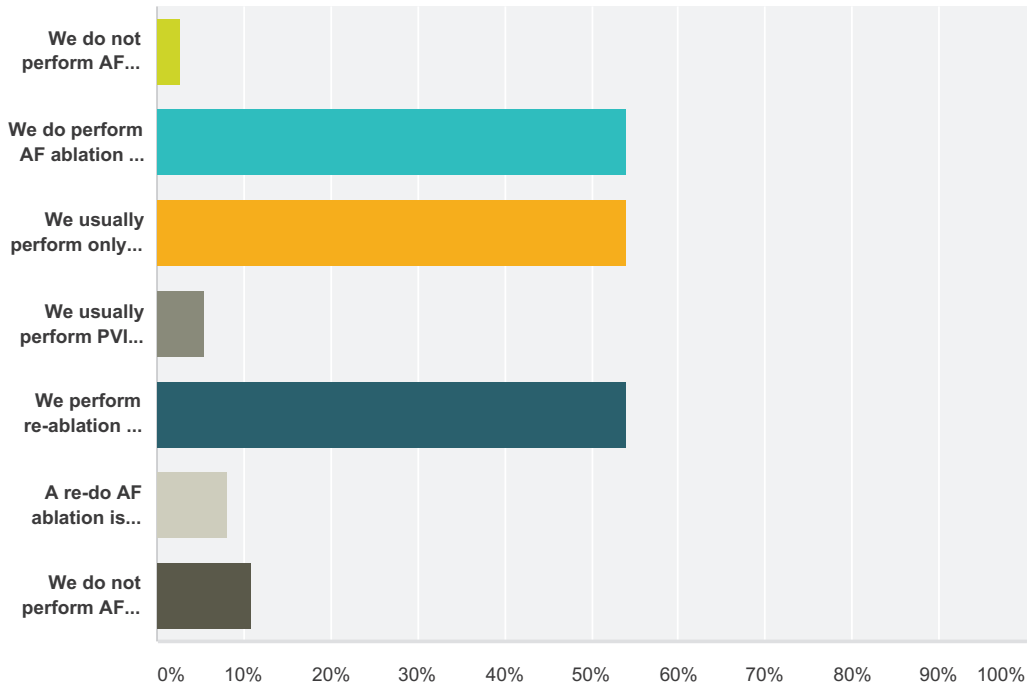


	Mildly decreased renal function (eGFR 60-89)	Moderately decreased renal function (eGFR 30-59)	Severely decreased renal function (eGFR <30)	Dialysis or renal transplant	Total Respondents
We usually prescribe a vitamin K antagonist (VKAs)	**36.11%** 13	**27.78%** 10	**66.67%** 24	**83.33%** 30	36

We usually prescribe a non-VKA oral anticoagulant (NOAC), without specific preference	**95.00%** 19	**30.00%** 6	**0.00%** 0	**0.00%** 0	20
We prefer Dabigatran for this stage of CKD	**91.67%** 11	**33.33%** 4	**0.00%** 0	**0.00%** 0	12
We prefer Rivaroxaban for this stage of CKD	**43.75%** 7	**62.50%** 10	**18.75%** 3	**0.00%** 0	16
We prefer Apixaban for this stage of CKD	**39.13%** 9	**82.61%** 19	**34.78%** 8	**0.00%** 0	23
We prefer Edoxaban for this stage of CKD	**50.00%** 3	**66.67%** 4	**0.00%** 0	**0.00%** 0	6
We let the patient choose	**72.73%** 8	**54.55%** 6	**18.18%** 2	**9.09%** 1	11
The choice between VKAs or NOACs is not influenced by the presence of CKD	**100.00%** 8	**50.00%** 4	**0.00%** 0	**0.00%** 0	8

Q16 Regarding AF catheter ablation in patients with CKD, please select all options that are valid for your Centre:

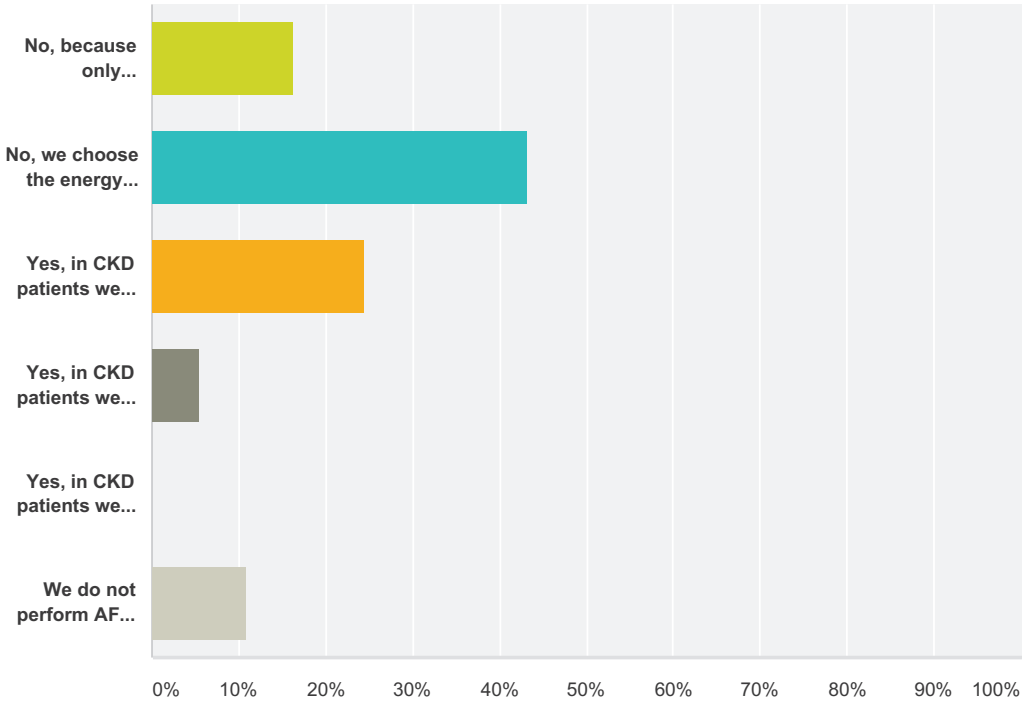
Answered: 37 Skipped: 11



Answer Choices	Responses	
We do not perform AF ablation in patients with CKD of any stage.	2.70%	1
We do perform AF ablation in patients with mild or moderate, but not severe CKD.	54.05%	20
We usually perform only the pulmonary veins isolation (PVI) in patients with AF and CKD.	54.05%	20
We usually perform PVI plus an extensive AF substrate ablation.	5.41%	2
We perform re-ablation in AF patients with CKD as needed (the same way as in patients without CKD).	54.05%	20
A re-do AF ablation is usually not offered to AF patients with CKD in our Centre.	8.11%	3
We do not perform AF ablation in our centre.	10.81%	4
Total Respondents: 37		

Q17 Does the presence of CKD influence the choice of ablation energy (i.e., radiofrequency, cryo, laser) in your Centre?

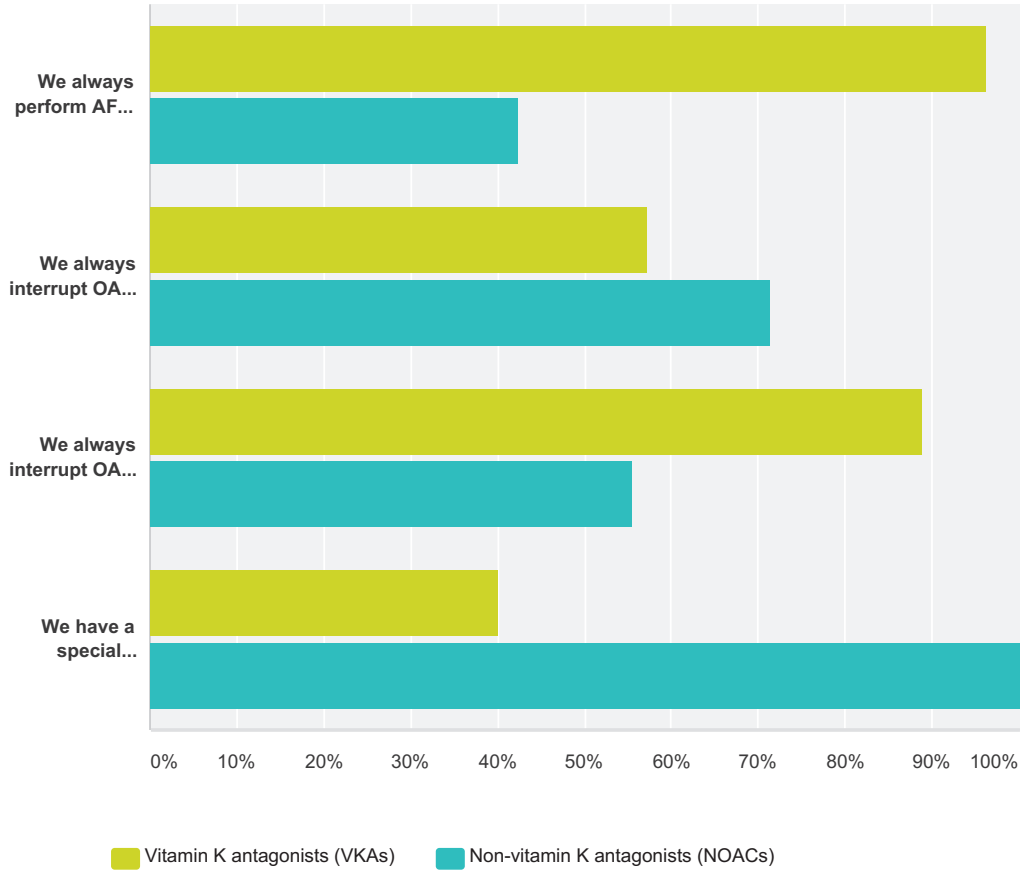
Answered: 37 Skipped: 11



Answer Choices	Responses	
No, because only radiofrequency ablation is available in my centre.	**16.22%**	6
No, we choose the energy source irrespective of the presence or absence of CKD.	**43.24%**	16
Yes, in CKD patients we preferentially use radiofrequency ablation.	**24.32%**	9
Yes, in CKD patients we preferentially use cryoablation.	**5.41%**	2
Yes, in CKD patients we preferentially use laser ablation.	**0.00%**	0
We do not perform AF ablation in my Centre.	**10.81%**	4
Total		**37**

Q18 Regarding AF catheter ablation in patients with CKD, how do you manage periprocedural oral anticoagulant therapy (OAC)? (please select all options that are valid for your Centre)

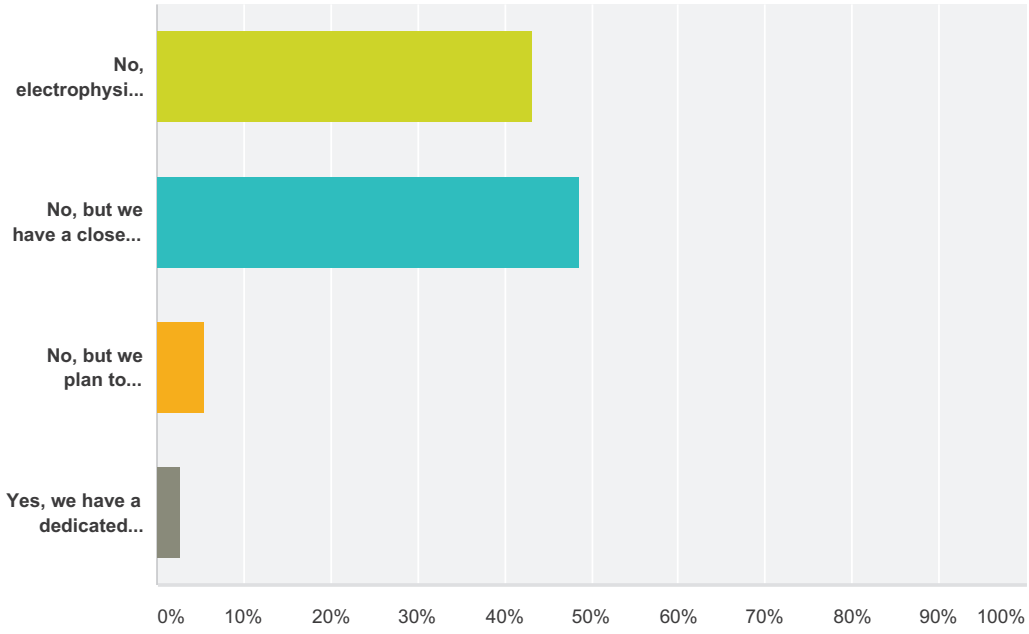
Answered: 37 Skipped: 11



	Vitamin K antagonists (VKAs)	Non-vitamin K antagonists (NOACs)	Total Respondents
We always perform AF ablation under uninterrupted OAC (under therapeutic INR in patients taking a VKA)	**96.15%** 25	**42.31%** 11	26
We always interrupt OAC prior to AF ablation in patients with moderate-to-severe CKD, due to a higher risk of bleeding in CKD patients	**57.14%** 4	**71.43%** 5	7
We always interrupt OAC and use heparin bridging in patients with moderate-to severe CKD, due to increased risk of stroke in CKD	**88.89%** 8	**55.56%** 5	9
We have a special protocol for earlier temporary discontinuation of OAC prior to AF ablation in patients with CKD	**40.00%** 4	**100.00%** 10	10

Q19 Does your Centre have a structured multidisciplinary team for management of patients with AF and CKD?

Answered: 37 Skipped: 11



Answer Choices	Responses	
No, electrophysiologists/general cardiologists in my Centre routinely manage such patients.	**43.24%**	16
No, but we have a close collaboration among electrophysiologists/general cardiologists and nephrologists in my Centre.	**48.65%**	18
No, but we plan to organize such team in my Centre.	**5.41%**	2
Yes, we have a dedicated multidisciplinary team for management of patients with cardiac arrhythmias and CKD in my Centre.	**2.70%**	1
Total		**37**