

Supplemental Table 1. Definition of Clinical Covariates

Clinical Covariate	Definition		
Diabetes	<p>History of Type 1 and Type 2 diabetes mellitus observed at any point during the baseline period: Identified using criteria specified from the Kaiser Permanente Southern California (KPSC) Diabetes Registry through pharmacy information and inpatient or outpatient diagnoses and defined as any of the following:</p> <ul style="list-style-type: none"> a) At least one primary inpatient discharge diagnoses of ICD-9 250.x (claims plan and outpatient codes from emergency department (ED) Obstetrics/Gynecology Podiatry and Ophthalmology are excluded); OR b) At least two or more outpatient diagnoses of ICD-9 250.x (claims plan and outpatient codes from ED Obstetrics/Gynecology Podiatry and Ophthalmology are excluded) occurring on separate dates no more than 2 years apart; OR c) At least one or more dispensed prescriptions for an oral hypoglycemic agent (see medication list below excluding use of metformin [GPI ‘2725’] exenatide [GPI ‘2717002’] liraglutide [GPI ‘2717005’] thiazolidinedione [GPI ‘2760’] or repaglinide [GPI ‘2728’] only) OR insulin (GPI ‘2710’) d) Women diagnosed with gestational diabetes (ICD-9 codes 648.8x, 790.21, 790.22, 790.29) within 8 months from the inpatient or outpatient diagnosis of diabetes mellitus will be excluded from meeting the definition of diabetes. e) Patients receiving metformin, exenatide, thiazolidinedione, or repaglinide exclusively (with no other agent) or with no inpatient or outpatient diagnosis of diabetes within two years will be excluded from meeting the definition of diabetes. 		
	<u>Oral Hypoglycemic Medications</u>		
	<i>Generic name</i>	<i>Class</i>	<i>GPI</i>
	Acarbose	Alpha-glucosidase inhibitor	‘2750’
	Acetohexamide	Sulfonylurea	‘2720’
	Canagliflozin	Sodium-glucose co-transporter 2 (SGLT2) inhibitor	‘2770’
	Chlorpropamide	Sulfonylurea	‘2720’
	Exenatide* (injection drug but count as oral)	Glucagon-like peptide-1 (GLP-1) agonist	‘2717’
	Glimepiride	Sulfonylurea	‘2720’
	Glipizide	Sulfonylurea	‘2720’
	Glipizide-metformin HCl	SU-Metformin combo	‘2799’
	Glyburide	Sulfonylurea	‘2720’

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Glyburide micronized	Sulfonylurea	'2720'
Glyburide-metformin	SU-Metformin combo	'2799'
Linagliptin	Dipeptidyl peptidase IV (DPP-IV) inhibitors	'2755'
Linagliptin-metformin HCl	DPP-IV-Metformin combo	'2799'
Liraglutide*	GLP-1 agonist	'2717'
Metformin HCl*	Biguanide	'2725'
Miglitol	Alpha-glucosidase inhibitor	'2750'
Nateglinide	Meglitinides	'2728'
Pioglitazone HCl*	Thiazolidinediones (TZDs)	'2760'
Pioglitazone HCl-glimepiride	TZD-SU combo	'2799'
Pioglitazone HCl-metformin HCl	TZD-Metformin combo	'2799'
Pramlintide acetate (injection drug but count as oral drug)	Pramlintide	'2715'
Repaglinide*	Meglitinides	'2728'
Repaglinide-metformin HCl	Meglitinides-Metformin combo	'2799'
Rosiglitazone maleate*	TZD	'2760'
Rosiglitazone-glimepiride	TZD-SU combo	'2799'
Rosiglitazine-metformin	TZD-Metformin combo	'2799'
Saxagliptin HCl	DPP-IV inhibitors	'2755'
Saxagliptin-metformin	DPP-IV-Metformin combo	'2799'
Sitagliptin phosphate	DPP-IV inhibitors	'2755'
Sitagliptin-metformin HCl	DPP-IV-Metformin combo	'2799'
Tolazamide	Sulfonylurea	'2720'
Tolbutamide	Sulfonylurea	'2720'
Voglibose	Alpha-glucosidase inhibitor	'2750'
<p>*Patients with dispensing records of these agents exclusively (with no other diabetes medication or with no diagnosis of diabetes) are not included.</p> <p>For example:</p> <p>Patients with one of the * drugs and an eligible diagnosis code would be included. Patients with one of the * drugs and another diabetes medication (another drug in the table or insulin) would be included.</p> <p>Patients with two of the * drugs but no eligible diagnosis codes would be included.</p> <p>Patients with one of the * drugs and no use of another diabetes medication (another drug in the table or insulin) and no eligible diagnosis codes would be excluded.</p>		

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Hypertension	Defined as at least 2 outpatient ICD-9 codes of 401-405 OR at least one outpatient diagnosis of hypertension plus 1 or more anti-hypertensive drug prescriptions [GPI '33', '34', '36', '37'] within 1 year of outpatient diagnosis.
Acute Myocardial Infarction	Defined as at least one inpatient discharge diagnosis of ICD-9 code 410.x (any position), and coronary revascularization defined as at least one inpatient or outpatient diagnoses for PCI (ICD-9 procedure codes 00.66, 36.01, 36.02, 36.05-36.07, 36.09; CPT codes 92980-92982, 92984, 92995, 92996) or CABG (ICD-9 procedure codes 36.10-36.19; CPT codes 33510-33519, 33521-33523, 33530, 33533-33536, 93539, 93540).
HIV	Defined by HIV Registries at KPSC
Hepatitis B Infection (HBV)	<p>Defined according to validated HBV Registry as meeting any one of the following criteria:</p> <ul style="list-style-type: none"> a) Positive qualitative or quantitative HBV DNA b) Positive qualitative or quantitative Hepatitis B Virus Surface Antigen (HBs Ag) c) Positive qualitative or quantitative Hepatitis B Virus e Antigen (HBe Ag) d) Prescription of any of the following HBV Medications: <ul style="list-style-type: none"> 1. Adefovir (Hepsera® , Preveon, bis-POM PMPA, GS 840), Entecavir (Baraclude®, BMS-200475), or Telbivudine (Tyzeka®, Sebivo) for ≥ 90-days within 1 year. 2. Two outpatient diagnoses of chronic HBV and Interferon alfa-2b (intron A®) or Pegylated interferon (Pegasys® or peginterferon alfa-2a, PEG-intron® or peginterferon alfa-2b) for at least 90 days with no concurrent prescription for oral Ribavirin within a year. 3. Lamivudine (Epivir®; 3TC) at 100 mg/day for ≥ 90-days within 1 year without any other medications for HCV & HIV e) Two outpatient chronic HBV visits and Tenofovir (Viread®, bis-POC-PMPA) or Emtricitabine+tenofovir (emtriva®+viread® or Truvada®) for at least 90 days without any other HIV medications within a year
End-Stage Liver Disease	<p>At least one ICD-9-CM code for cirrhosis plus one ICD-9-CM code for a hepatic decompensation:</p> <ul style="list-style-type: none"> 1. Cirrhosis: 571.2 (alcoholic cirrhosis), 571.5 (cirrhosis without mention of alcohol, 571.6 (biliary cirrhosis) 2. Hepatic decompensation: 456.0, 456.20 (esophageal varices with bleeding); 456.1, 456.21 (esophageal varices without bleeding); 789.5, 89.59 (ascites); 572.2 (hepatic coma)l 567.0, 567.2, 567.21, 567.21, 567.29, 567.8, 567.89, 567.9 (peritonitis); 572.4 (hepatorenal syndrome)

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Supplemental Table 2. Characteristics of Kaiser Permanente Southern California HCV&CKD Patients, by HCV Treatment Status

	Excluded from the study cohort		Included in the study cohort	
	HCV treatment before index date	HCV treatment after index date	No HCV treatment	
N	218	40	1288	
Age				
Mean (standard deviation)	61.5 (9.11)	61.9 (9.45)	66.4 (10.73)	
Median	61.5	61.5	66	
Q1, Q3	56.0, 68.0	55.0, 67.0	58.0, 75.0	
Range	(22.0-82.0)	(45.0-83.0)	(32.0-97.0)	
Sex				
Female	80 (36.7%)	18 (45%)	574 (44.6%)	
Male	138 (63.3%)	22 (55%)	714 (55.4%)	
Race/ Ethnicity				
Asian/Native Hawaiian or Other Pacific Islander	9 (4.1%)	3 (7.5%)	68 (5.3%)	
Black or African	50 (22.9%)	12 (30%)	354 (27.5%)	
Hispanic	56 (25.7%)	13 (32.5%)	360 (28%)	
White	103 (47.2%)	11 (27.5%)	506 (39.3%)	
Multiple/Others		1 (2.5%)		
History of Type 1 and Type 2 Diabetes Mellitus				
No	123 (56.4%)	21 (52.5%)	690 (53.6%)	
Yes	95 (43.6%)	19 (47.5%)	598 (46.4%)	
Hypertension				
No	64 (29.4%)	8 (20%)	357 (27.7%)	
Yes	154 (70.6%)	32 (80%)	931 (72.3%)	
HIV				
No	209 (95.9%)	37 (92.5%)	1254 (97.4%)	
Yes	9 (4.1%)	3 (7.5%)	34 (2.6%)	
Hepatitis B Virus				
No	210 (96.3%)	39 (97.5%)	1272 (98.8%)	
Yes	8 (3.7%)	1 (2.5%)	16 (1.2%)	
Acute Myocardial Infarction				
No	213 (97.7%)	39 (97.5%)	1257 (97.6%)	
Yes	5 (2.3%)	1 (2.5%)	31 (2.4%)	
Baseline closest FIB4				
N	153	27	666	
Mean (standard deviation)	5.5 (6.50)	3.7 (4.57)	7.1 (26.27)	
Median	3	2.2	3.5	
Q1, Q3	1.7, 7.0	1.2, 3.0	1.9, 7.1	
Range	(0.4-41.3)	(0.9-18.7)	(0.3-648.8)	
Baseline CKD stage				
Stage 3	204 (93.6%)	29 (72.5%)	1135 (88.1%)	
Stage 4	10 (4.6%)	7 (17.5%)	105 (8.2%)	
Stage 5	4 (1.8%)	4 (10%)	48 (3.7%)	

HCV=hepatitis C virus; CKD=chronic kidney disease;

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Supplemental Table 3. Adjusted Difference in the Change in eGFR over Time in Patients with Chronic Kidney Disease (CKD) and Hepatitis C Virus (HCV) Infection Compared to those with Chronic Kidney Disease Alone

Parameter	Estimate	Standard Error	95% Confidence Limits		Pr > Z
HCV&CKD^a	-4.37	0.28	-4.91	-3.82	<.0001
Time (year)	-1.04	0.01	-1.06	-1.01	<.0001
CKD Stage 4^b	-16.24	0.17	-16.57	-15.91	<.0001
CKD Stage 5^b	-24.41	0.45	-25.30	-23.52	<.0001
Diabetes Mellitus	-0.98	0.05	-1.07	-0.88	<.0001
Hypertension	-0.12	0.04	-0.20	-0.03	0.0061
HIV	-0.01	0.37	-0.72	0.71	0.9842
Hepatitis B Virus	0.70	0.40	-0.09	1.49	0.0844
Myocardial Infarction	-2.19	0.12	-2.43	-1.95	<.0001
End-stage Liver Disease	-4.66	0.32	-5.29	-4.04	<.0001
Age (years)	0.02	0.00	0.01	0.02	<.0001
Sex (Female)^c	-0.11	0.04	-0.19	-0.03	0.0058
Asian/Pacific Islander^d	0.52	0.08	0.36	0.68	<.0001
Black^d	-0.87	0.07	-1.01	-0.73	<.0001
Hispanic^d	-0.60	0.06	-0.72	-0.47	<.0001
Other Race^d	0.56	0.51	-0.44	1.55	0.2738
Time (year)*HCV&CKD^e	-0.58	0.13	-0.84	-0.31	<.0001
Time (year)*Diabetes mellitus	-0.89	0.02	-0.94	-0.85	<.0001
Time (year)*HBV	-0.70	0.22	-1.12	-0.27	0.0012
Time (year)*Asian/Pac. Islander^d	-0.39	0.04	-0.46	-0.32	<.0001
Time (year)*Black^d	-0.55	0.03	-0.62	-0.49	<.0001
Time (year)* Hispanic^d	-0.45	0.03	-0.51	-0.39	<.0001
Time (year)*Other Race^d	-0.21	0.25	-0.71	0.29	0.4072
Time (year)*HCV&CKD + Time (year)	-1.61	0.14	-1.90	-1.33	<.0001

^a Reference value = CKD only; CKD = Chronic Kidney Disease, HCV = Hepatitis C infection

^b Reference value = CKD Stage 3

^c Reference value = Male

^d Reference value = White race

^e Reference value = Time*CKD only

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Supplemental Table 4.

a) Stratified Adjusted Hazard Ratios for 25% decrease in eGFR in HCV Treatment Naïve Patients with HCV&CKD (N=1603) compared to CKD alone (N=151974)*

Subgroup		Diabetes Mellitus						Hypertension						CKD Stage								
		Yes (N=48735)			No (N=104842)			Yes (N=93885)			No (N=59692)			Stage 3 (N=148931)			Stage 4 (N=3777)			Stage 5 (N=869)		
		HR	95% CI		HR	95% CI		HR	95% CI		HR	95% CI		HR	95% CI		HR	95% CI		HR	95% CI	
Cohort	HCV+CKD	1.8	1.6	1.9	2.0	1.8	2.2	1.8	1.7	2.0	2.2	1.9	2.5	1.7	1.6	1.8	2.4	1.9	3.0	2.9	1.9	4.6
	CKD only	1.0	Ref		1.0	Ref		1.0	Ref		1.0	Ref		1.0	Ref		1.0	Ref		1.0	Ref	
Baseline eGFR		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	NA								
Diabetes mellitus	Yes	NA						1.6	1.6	1.7	1.9	1.8	1.9	1.7	1.7	1.7	1.3	1.2	1.4	1.2	0.8	1.6
	No	NA						1.0	Ref		1.0	Ref		1.0	Ref		1.0	Ref		1.0	Ref	
Hypertension	Yes	1.2	1.1	1.2	1.3	1.2	1.3	NA						1.3	1.2	1.3	0.7	0.6	0.8	0.7	0.5	0.9
	No	1.0	Ref		1.0	Ref		NA						1.0	Ref		1.0	Ref		1.0	Ref	
HIV	Yes	1.2	0.9	1.5	1.7	1.4	1.9	1.3	1.1	1.6	1.5	1.2	1.8	1.5	1.3	1.7	0.4	0.2	1.0	NA		
	No	1.0	Ref		1.0	Ref		1.0	Ref		1.0	Ref		1.0	Ref		1.0	Ref		NA		
Hepatitis B Virus	Yes	0.9	0.7	1.2	1.3	1.1	1.6	1.2	1.0	1.4	1.1	0.9	1.4	1.1	1.0	1.3	2.2	0.9	5.0	1.1	0.3	4.8
	No	1.0	Ref		1.0	Ref		1.0	Ref		1.0	Ref		1.0	Ref		1.0	Ref		1.0	Ref	
Myocardial Infarction	Yes	1.5	1.4	1.6	1.5	1.4	1.6	1.5	1.4	1.5	1.6	1.4	1.8	1.5	1.4	1.5	0.9	0.7	1.2	0.8	0.3	1.7
	No	1.0	Ref		1.0	Ref		1.0	Ref		1.0	Ref		1.0	Ref		1.0	Ref		1.0	Ref	
End-Stage Liver Disease	Yes	3.1	2.7	3.5	5.1	4.4	5.9	3.4	3.0	3.8	4.8	4.1	5.7	3.8	3.4	4.2	1.7	1.0	3.1	NA		
	No	1.0	Ref		1.0	Ref		1.0	Ref		1.0	Ref		1.0	Ref		1.0	Ref		NA		
Age		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Sex	Female	1.0	1.0	1.1	1.0	1.0	1.0	1.1	1.0	1.1	1.0	0.9	1.0	1.0	1.0	1.0	0.8	0.7	0.9	0.9	0.7	1.2
	Male	1.0	Ref		1.0	Ref		1.0	Ref		1.0	Ref		1.0	Ref		1.0	Ref		1.0	Ref	
Race/Ethnicity	Asian/PI	0.9	0.9	1.0	1.1	1.0	1.1	1.0	0.9	1.0	1.1	1.1	1.2	1.0	1.0	1.0	1.1	0.9	1.4	1.5	0.8	2.6
	Black	1.1	1.1	1.2	1.4	1.4	1.4	1.2	1.1	1.2	1.5	1.5	1.6	1.3	1.2	1.3	1.4	1.2	1.6	2.3	1.6	3.3
	Hispanic	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.1	1.2	1.3	1.3	1.4	1.2	1.2	1.2	1.4	1.3	1.6	2.0	1.4	2.9
	Others	0.8	0.7	1.1	0.8	0.7	1.0	0.8	0.6	0.9	1.0	0.8	1.3	0.8	0.7	1.0	1.5	0.7	3.0	2.7	0.4	19.8
	White	1.0	Ref		1.0	Ref		1.0	Ref		1.0	Ref		1.0	Ref		1.0	Ref		1.0	Ref	

*Sex, age, and race not shown; none are statistically different; HCV=hepatitis C virus infection, CKD=chronic kidney disease, CI=confidence interval, HR=hazard ratio, PI=pacific islander

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b.) Stratified Adjusted Cause-Specific Hazard Ratio for ESRD in HCV Treatment Naïve Patients with HCV+CKD (N=1534) compared to CKD alone (N=151174)*

Subgroup		Diabetes Mellitus						Hypertension						CKD Stage					
		Yes (N=48507)			No (N=104201)			Yes (N=93493)			No (N=59215)			Stage 3 (N=148931)			Stage 4 (N=3777)		
		HR	95% CI		HR	95% CI		HR	95% CI		HR	95% CI		HR	95% CI		HR	95% CI	
Cohort	HCV+CKD	1.4	1.1	1.8	2.6	2.1	3.3	1.3	1.0	1.7	3.2	2.6	4.0	2.5	2.1	3.0	1.1	0.7	1.6
	CKD only	1.0	Ref		1.0	Ref		1.0	Ref		1.0	Ref		1.0	Ref		1.0	Ref	
Baseline eGFR		1.0	1.0	1.0	0.9	0.9	0.9	1.0	0.9	1.0	0.9	0.9	0.9	NA					
Diabetes mellitus	Yes	NA						3.6	3.3	3.9	2.2	2.0	2.4	3.0	2.8	3.2	1.6	1.3	1.9
	No	NA						1.0	Ref		1.0	Ref		1.0	Ref		1.0	Ref	
Hypertension	Yes	1.0	0.9	1.0	0.5	0.5	0.6	NA						0.8	0.7	0.8	0.6	0.5	0.7
	No	1.0	Ref		1.0	Ref		NA						1.0	Ref		1.0	Ref	
HIV	Yes	1.3	0.8	2.2	1.1	0.7	1.6	1.4	0.9	2.3	0.9	0.6	1.4	1.4	1.0	1.9	0.7	0.2	2.1
	No	1.0	Ref		1.0	Ref		1.0	Ref		1.0	Ref		1.0	Ref		1.0	Ref	
Hepatitis B Virus	Yes	1.2	0.7	2.1	1.4	0.8	2.5	1.2	0.7	2.2	1.1	0.6	1.9	1.1	0.7	1.7	1.7	0.5	5.6
	No	1.0	Ref		1.0	Ref		1.0	Ref		1.0	Ref		1.0	Ref		1.0	Ref	
Myocardial Infarction	Yes	1.2	1.0	1.5	1.4	1.0	1.9	1.2	1.0	1.4	1.5	1.1	2.0	1.4	1.2	1.7	1.0	0.7	1.6
	No	1.0	Ref		1.0	Ref		1.0	Ref		1.0	Ref		1.0	Ref		1.0	Ref	
End-Stage Liver Disease	Yes	1.9	1.3	2.9	4.7	3.2	7.0	2.5	1.7	3.7	3.2	2.2	4.8	3.9	2.9	5.2	2.2	1.0	4.7
	No	1.0	Ref		1.0	Ref		1.0	Ref		1.0	Ref		1.0	Ref		1.0	Ref	
Age		0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.0	1.0	1.0
Sex	Female	0.7	0.6	0.7	0.6	0.6	0.7	0.6	0.6	0.7	0.7	0.6	0.7	0.7	0.7	0.7	0.6	0.5	0.7
	Male	1.0	Ref		1.0	Ref		1.0	Ref		1.0	Ref		1.0	Ref		1.0	Ref	
Race/Ethnicity	Asian/PI	1.6	1.4	1.8	1.6	1.3	1.8	1.5	1.3	1.7	1.8	1.6	2.1	1.6	1.5	1.8	1.8	1.3	2.4
	Black	2.0	1.8	2.2	3.9	3.5	4.3	1.7	1.5	1.9	4.6	4.1	5.0	2.9	2.7	3.1	2.4	1.9	2.9
	Hispanic	2.3	2.1	2.6	2.0	1.8	2.3	2.1	1.9	2.3	2.5	2.2	2.7	2.4	2.2	2.6	2.0	1.6	2.4
	Others	2.0	1.2	3.4	3.1	1.8	5.2	1.1	0.5	2.2	4.3	2.8	6.7	2.4	1.6	3.6	2.1	0.9	5.1
	White	1.0	Ref		1.0	Ref		1.0	Ref		1.0	Ref		1.0	Ref		1.0	Ref	

*Sex, age, and race not shown; none are statistically different; HCV=hepatitis C virus infection, CKD=chronic kidney disease, CI=confidence interval, HR=hazard ratio, PI=pacific islander

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Adjusted Cause-Specific Hazard Ratio for Persistent eGFR <15 and Dialysis in Patients with Treatment Naïve HCV and Chronic Kidney Disease (N=1603) Compared to those with Chronic Kidney Disease Alone (N=151974)

		eGFR <15 (n=2724)		Dialysis (n=2678)	
		HR*†	95% CI	HR*†	95% CI
Cohort	HCV&CKD*	1.94	1.53 – 2.45	2.18	1.75 - 2.71
	CKD only	1.00	Ref	1.00	Ref
Age (years)		0.93	0.92 – 0.93	0.94	0.94 - 0.95
Sex	Female	0.71	0.66 – 0.76	0.59	0.55 - 0.64
	Male	1.00	Ref	1.00	Ref
Race	Asian/Pacific Islander	2.40	2.09 – 2.75	1.09	0.94 - 1.27
	Black	3.61	3.25 – 4.01	2.20	1.99 - 2.42
	Hispanic	2.97	2.67 – 3.29	1.84	1.67 - 2.03
	Others	3.85	2.41 – 6.16	1.43	0.77 – 2.67
	White	1.00	Ref	1.00	Ref
Baseline Comorbidity	Diabetes mellitus	2.62	2.42 – 2.83	3.06	2.82 – 3.32
	Hypertension	0.65	0.60 – 0.71	0.85	0.78 - 0.92
	HIV	1.26	0.81 – 1.96	1.21	0.76 - 1.92
	Hepatitis B	1.26	0.71 – 2.21	1.25	0.70 – 2.25
	Myocardial Infarction	0.98	0.74 – 1.28	1.62	1.33 - 1.97
Baseline eGFR*		0.93	0.93 – 0.94	0.95	0.95 - 0.95

*HR=Hazard Ratio; CKD=Chronic Kidney Disease; HCV=Hepatitis C Virus; eGFR=Estimated Glomerular Filtration Rate

†Follow-up time is censored at the time of the start of dialysis, liver/kidney transplant, HCV treatment, death, disenrollment from KP health plan, or the end of the study period (12/31/2014); ESKD analyses censored on liver transplant, HCV treatment, death, disenrollment from KP health plan, or the end of the study period

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Supplemental Table 5. Sensitivity Analyses

Sensitivity Analyses using Propensity Score Matching

a.) Covariate distribution following propensity score match for analyses of 25% decline in eGFR

		HCV&CKD* N=1603	CKD only N= 1603
Sex			
	Female	691 (43%)	721 (45%)
	Male	912 (57%)	882 (55%)
Age at CKD Index Date	Mean (SD)	65.4 (10.63)	65.1 (13.78)
Race/Ethnicity			
	Asian/Native Hawaiian or Other Pacific Islander	78 (5%)	81 (5%)
	Black or African	576 (36%)	596 (37%)
	Hispanic	379 (24%)	383 (24%)
	Multiple/Others	5 (0.3%)	5 (0.3%)
	White	565 (35%)	538 (37%)
History of Type 1 and Type 2 Diabetes Mellitus		675 (42%)	668 (42%)
Hypertension		1128 (70%)	1142 (71%)
HIV		60 (4%)	62 (4%)
Hepatitis B		24 (2%)	22 (1%)
End Stage Liver Disease		141 (9%)	117 (7%)
Acute Myocardial Infarction		38 (2%)	33 (2%)
eGFR value at baseline	Mean (SD)	44 (12.86)	44 (12.99)

*HCV=hepatitis C virus, CKD=chronic kidney disease, SD=standard deviation

b.) Covariate distribution following propensity score match for analyses of ESKD

		HCV&CKD N=1534	CKD only N= 1534
Sex			
	Female	660 (43%)	640 (42%)
	Male	874 (57%)	894 (58%)
Age at CKD Index Date	Mean (SD)	65.6 (10.56)	66.0 (12.98)
Race/Ethnicity			
	Asian/Native Hawaiian or Other Pacific Islander	75 (5%)	78 (5%)
	Black or African	543 (35%)	579 (38%)
	Hispanic	361 (24%)	355 (23%)
	Multiple/Others	5 (0.3%)	3 (0.2%)
	White	550 (36%)	519 (34%)
History of Type 1 and Type 2 Diabetes Mellitus		646 (42%)	643 (42%)
Hypertension		1073 (70%)	1100 (72%)
HIV		59 (4%)	56 (4%)
Hepatitis B		23 (2%)	20 (1%)
End Stage Liver Disease		140 (9%)	118 (8%)
Acute Myocardial Infarction		35 (2%)	39 (3%)
eGFR value at baseline	Mean (SD)	45 (10.78)	45 (10.54)

*HCV=hepatitis C virus, CKD=chronic kidney disease, SD=standard deviation

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c.) Propensity-Score Matched Adjusted Cause-Specific Hazard Ratio for 25% Decrease in eGFR and End Stage Kidney Disease in Patients with Chronic Kidney Disease (CKD) and Hepatitis C Infection (HCV) Compared to Those with Chronic Kidney Disease Alone

		25% Decline in eGFR		End-Stage Kidney Disease	
		Hazard Ratio*	95% CI	Hazard Ratio*	95% CI
Cohort	HCV&CKD	1.82	1.65 – 2.01	1.55	1.24 – 1.95
	CKD only	1.00	Ref	1.00	Ref

*Adjusted for sex, age, race, diabetes, hypertension, HIV, hepatitis B, end stage liver disease, acute myocardial infarction, and eGFR at baseline.

Sensitivity Analyses Including only HCV RNA Positive Cases (HCV positive n=1372)

Adjusted Cause-Specific Hazard Ratio for 25% Decrease in eGFR and End Stage Kidney Disease in Patients with Chronic Kidney Disease and RNA Positive Hepatitis C Infection Compared to Those with Chronic Kidney Disease Alone

		25% Decline in eGFR		End-Stage Kidney Disease	
		HR* [†]	95% CI	HR* [‡]	95% CI
Cohort	HCV&CKD*	1.84	1.71 – 1.98	1.93	1.62 - 2.29
	CKD only	1.00	Ref	1.00	Ref
Age (years)		1.00	1.00 – 1.00	0.93	0.93 - 0.94
Sex	Female	1.01	0.99 – 1.03	0.65	0.61 - 0.68
	Male	1.00	Ref	1.00	Ref
Race	Asian/Pacific Islander	1.01	0.98 – 1.04	1.65	1.49 - 1.82
	Black	1.28	1.25 – 1.31	2.80	2.61 - 3.00
	Hispanic	1.21	1.19 – 1.24	2.31	2.15 - 2.48
	Others	0.84	0.72 – 0.98	2.37	1.62 - 3.46
	White	1.00	Ref	1.00	Ref
Baseline Comorbidity	Diabetes mellitus	1.71	1.68 – 1.74	2.81	2.65 - 2.97
	Hypertension	1.24	1.22 – 1.26	0.75	0.72 - 0.79
	HIV	1.44	1.27 – 1.64	1.26	0.91 - 1.73
	Hepatitis B	1.18	1.03 – 1.36	1.17	0.78 - 1.76
	Myocardial Infarction	1.48	1.42 – 1.55	1.33	1.14 - 1.56
	ESLD	3.82	3.47 – 4.20	2.91	2.12 – 3.84
Baseline eGFR*		1.02	1.02 – 1.02	0.94	0.94 - 0.94

*HR=Hazard Ratio; CKD=Chronic Kidney Disease; HCV=Hepatitis C Virus; eGFR=Estimated Glomerular Filtration Rate

[‡]Patients with baseline eGFR < 15 were excluded: CKD only N=151974, HCV&CKD N=1372

[†]Follow-up time is censored at the time of the start of dialysis, liver/kidney transplant, HCV treatment, death, disenrollment from KP health plan, or the end of the study period (12/31/2014); ESKD analyses censored on liver transplant, HCV treatment, death, disenrollment from KP health plan, or the end of the study period

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Supplemental Figure 1. Schematic Demonstrating Start of Person-Time, by Timing of Diagnosis

