

Atrius Health CAC Data Analysis

Initial Analysis Conducted by Yoni Dvorkis on June 7, 2021

Atrius Health Coronary Artery Calcification Summary Report

Developed by Advanced Analytics (YD) on
6/07/2021

Report Criteria:

- * Identify Chest CT scans rendered by Atrius Health Radiology: test name like "%CHEST%CT%"
- * Full list of CT Scan names included in APPENDIX tab "CHEST CT SCAN PROC NAMES"
- * CT Scans were performed on or after 9/18/2020 (may have been ordered earlier than this date)
- * Exclude patients age less than 79
- * CAC commentary uses imaging narrative text
- * STATIN medications identified by name as "%STATIN%" i.e. the string Statin must appear somewhere in the name to qualify for inclusion. Excludes NYSTATIN and SANDOSTATIN.
- * STATIN medications identified by name as "%ASPIRIN%" similar to stain logic above
- * Active medications only. All inactive medications or medications that have been discontinued for the patient in Epic are excluded from the analysis
- * CVRS is likely not available in Epic database as an extractable field. TBD

Total identified Chest CT Scans: 4,785

Report:

Q1. After 9/18/2020, of all CT chest reports for patients <79, what proportion of reports commented on CAC severity?

Total Scans	CAC Commented	% CAC Commented
4,785	4,614	96.4%

Q2. What proportion of chest CTs were noted to have 1) no CAC, 2) mild CAC, 3) mod CAC, 4) severe CAC.

* denominator for this metric is the 4,519 scans above with CAC commented. Chart review detail is available on tab "CHEST CT PAT DETAIL"

CAC Commented	No CAC	% No CAC	Mild CAC	% Mild CAC	Moderate CAC	% Moderate CAC	Severe CAC	% Severe CAC
4,614	2,052	44.5%	1,225	26.5%	808	17.5%	529	11.5%

Q3. Is patient on Statin?

Patient on Statin	Volume	% of Total
Y	2,653	55.4%
N	2,132	44.6%
TOTAL	4,785	100.0%

Patient on Statin	SEVERE CAC		MODERATE CAC		MILD CAC		NO CAC	
	Volume	% of Total	Volume	% of Total	Volume	% of Total	Volume	% of Total
Y	469	88.7%	626	77.5%	803	65.6%	669	32.6%
N	60	11.3%	182	22.5%	422	34.4%	1,383	67.4%
TOTAL	529	100.0%	808	100.0%	1,225	100.0%	2,052	100.0%

Q4. If on a statin, was it started before or after the CT report

Statin Start Flag	Chest Ct Volume Where Patient is Active on a Statin	% of Total CT Scans where Patient is active on Statin
Before	1,324	49.9%
After	1,329	50.1%
TOTAL	2,653	100.0%

Statin Start Flag	SEVERE CAC		MODERATE CAC		MILD CAC		NO CAC	
	Chest Ct Volume Where Patient is Active on a Statin	% of Total CT Scans where Patient is active on Statin	Chest Ct Volume Where Patient is Active on a Statin	% of Total CT Scans where Patient is active on Statin	Chest Ct Volume Where Patient is Active on a Statin	% of Total CT Scans where Patient is active on Statin	Chest Ct Volume Where Patient is Active on a Statin	% of Total CT Scans where Patient is active on Statin
Before	232	49.5%	312	49.8%	380	47.3%	349	52.2%
After	237	50.5%	314	50.2%	423	52.7%	320	47.8%
TOTAL	469	100.0%	626	100.0%	803	100.0%	669	100.0%

Q5. If on a statin, what type of statin and what dose

Statin Name	Volume	% of Total Volume
ATORVASTATIN 40 MG TAB	597	22.5%
ATORVASTATIN 20 MG TAB	446	16.8%
ATORVASTATIN 80 MG TAB	354	13.3%
ATORVASTATIN 10 MG TAB	267	10.1%
SIMVASTATIN 20 MG TAB	218	8.2%
SIMVASTATIN 40 MG TAB	138	5.2%
ROSUVASTATIN 40 MG TAB	108	4.1%
PRAVASTATIN 40 MG TAB	90	3.4%
ROSUVASTATIN 20 MG TAB	80	3.0%
SIMVASTATIN 10 MG TAB	73	2.8%
PRAVASTATIN 20 MG TAB	68	2.6%
ROSUVASTATIN 10 MG TAB	58	2.2%
ROSUVASTATIN 5 MG TAB	51	1.9%
PRAVASTATIN 80 MG TAB	37	1.4%
PRAVASTATIN 10 MG TAB	18	0.7%
LOVASTATIN 20 MG TAB	13	0.5%
SIMVASTATIN 80 MG TAB	11	0.4%
SIMVASTATIN 5 MG TAB	7	0.3%
LOVASTATIN 40 MG TAB	6	0.2%
LOVASTATIN 10 MG TAB	3	0.1%
CRESTOR 40 MG TAB (ROSUVASTATIN CALCIUM)	3	0.1%
AMLODIPINE-ATORVASTATIN 5 MG-80 MG TAB	2	0.1%
ROSUVASTATIN 10 MG SPRINKLE CAPSULE	1	0.0%
AMLODIPINE-ATORVASTATIN 5 MG-10 MG TAB	1	0.0%
LIPITOR 40 MG TAB (ATORVASTATIN CALCIUM)	1	0.0%
LIVALO 2 MG TAB (PITAVASTATIN CALCIUM)	1	0.0%
EZETIMIBE-SIMVASTATIN 10 MG-40 MG TAB (E)	1	0.0%
TOTAL	2,653	100.0%

Q6. Is patient on Aspirin?

Patient on Aspirin	Volume	% of Total
Y	1,320	27.6%
N	3,465	72.4%
TOTAL	4,785	100.0%

Q7. If on aspirin was it started before or after the CT report

Aspirin Start Flag	Chest Ct Scans Where Patient is Active on a Aspirin	% of Total CT Scans where Patient is active on Aspirin
Before	1,174	88.9%
After	146	11.1%
TOTAL	1,320	100.0%

Q8. If on aspirin what type and what dose

Aspirin Name	Volume	% of Total Volume
ASPIRIN 81 MG TAB, DELAYED RELEASE	699	53.0%
ASPIRIN 81 MG CHEWABLE TAB	234	17.7%
ASPIRIN 81 MG TAB	172	13.0%
ASPIRIN 325 MG TAB	59	4.5%
BABY ASPIRIN ORAL	34	2.6%
ASPIRIN 325 MG TAB, DELAYED RELEASE	21	1.6%
ASPIRIN LOW DOSE ORAL	16	1.2%
ASPIRIN EC 81 MG TAB, DELAYED RELEASE	13	1.0%
BUTALBITAL-ASPIRIN-CAFFEINE 50 MG-325 MG	11	0.8%
ASPIRIN ORAL	11	0.8%
LOW-DOSE ASPIRIN ORAL	8	0.6%
BABY ASPIRIN 81 MG CHEWABLE TAB (ASPIRIN)	4	0.3%
ASPIR-81 81 MG TAB (ASPIRIN)	4	0.3%
ASPIRIN 81 MG CAP, DELAYED RELEASE	3	0.2%
ASPIRIN CHILDRENS ORAL	3	0.2%
ASPIRIN CHILD 81 MG CHEWABLE TABLET	2	0.2%
ADULT LOW DOSE ASPIRIN ORAL	2	0.2%
ASPIRIN 81 MG EFFERVESCENT TAB	2	0.2%
ECOTRIN 325 MG TAB (ASPIRIN)	2	0.2%
ASPIRIN, BUFFERED 325 MG TAB (ASPIRIN/MA	2	0.2%
ASPIRIN-ACETAMINOPHEN-CAFFEINE 250 MG	2	0.2%
ASPIRIN-CALCIUM CARBONATE 81 MG-300 MG	2	0.2%
DIPYRIDAMOLE-ASPIRIN SR 200 MG-25 MG MU	1	0.1%
ASPIRIN 81 MG-OMEPRAZOLE 40 MG TABLET,II	1	0.1%
ASPIRIN, BUFFERED ORAL	1	0.1%
ASPIRIN-ACETAMINOPHEN ORAL	1	0.1%
ASPIRIN, BUFFERED 500 MG TAB (ASA/CALCIU	1	0.1%
FIORINAL 50 MG-325 MG-40 MG CAP (BUTALBIT	1	0.1%
ADULT ASPIRIN EC LOW STRENGTH ORAL	1	0.1%
ENTERIC ASPIRIN 81 MG TABLET,DELAYED RE	1	0.1%
BAYER CHEWABLE LOW DOSE ASPIRIN 81 MG	1	0.1%
ECOTRIN LOW STRENGTH 81 MG TAB (ASPIRIN	1	0.1%
CHILDREN'S ASPIRIN ORAL	1	0.1%
ASPIRIN LOW-STRENGTH 81 MG CHEWABLE T	1	0.1%
ASPIRIN (BULK) 100 % POWDER	1	0.1%
BUTALBITAL-ASPIRIN-CAFFEINE 50 MG-325 MG	1	0.1%
TOTAL	1,320	100.0%

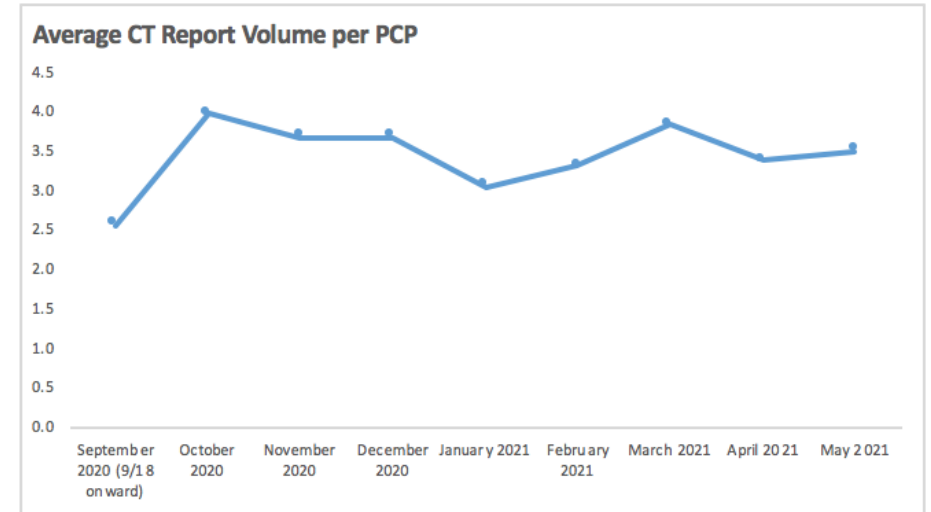
Q9. What is the average number of chest CT reports received per PCP per month?

** Assumes every Radiology report is by default forwarded to the PCP by the Radiologist*

Unique PCPs in Report:	239
Total CHEST CT Scans:	4,785
Average per PCP for entire study period:	20.0

Average per Month:

Month	Number of PCPs in Report	Chest CT Volume	Average CT Report Volume per PCP
September 2020 (9/18 onward)	119	304	2.6
October 2020	167	663	4.0
November 2020	148	545	3.7
December 2020	150	551	3.7
January 2021	156	477	3.1
February 2021	152	502	3.3
March 2021	155	594	3.8
April 2021	153	517	3.4
May 2021	153	536	3.5



Additional Data Investigation Atrius Health CT Scans with Moderate or Severe CAC – August 2021

Analysis Conducted by Yoni Dvorkis on September 14, 2021

Created on 9/14/2021

CAC Flag	Total Patients	# Patients active on Statin	% Active on Statin
Moderate	103	80	78%
Severe	97	90	93%
Total	200	170	85%

