follow than maximum diameter (Dm) when using 3D US imaging.

Table 1.

Variable	*CT vs US (PC coefficient)*	*CT vs US (IC coefficient)*
Dm	0.885 to 0.962 (p<0.01)	0.910 to 0.981 (p<0.01)
Cm	0.883 to 0.948 (p<0.01)	0.919 to 0.969 (p<0.01)
V	0.955 to 0.992 (p<0.01)	0.848 to 0.977 (p<0.01)

Author Disclosures: A. Jayaraj: Nothing to disclose; **B. Kirk**: Nothing to disclose; **D. Leotta**: Nothing to disclose; **M. Paun**: Nothing to disclose; **B. W. Starnes**: Nothing to disclose; **K. Ted**: Nothing to disclose; **E. Zierler**: Nothing to disclose.

PS20.

Socioeconomic Status Correlates with Treatment Modality and Cost for Patients Undergoing Repair of Abdominal Aortic Aneurysm

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Objectives: Previous studies have shown that low socioeconomic status is associated inferior outcomes and increased costs in patients with cardiovascular disease. The purpose of this study is to examine the relationship between socioeconomic status, costs, and outcomes in patients undergoing elective abdominal aortic aneurysm (AAA) repair.

Methods: A retrospective AAA database, which included socioeconomic factors (household income, education level and payor status), was analyzed over a three-year period. Patients were stratified by income level (low income [LI] < 200% FPL [$42,400 for a household of 4], and higher income [HI] > 200% FPL) and analyzed for mortality, serious adverse event (SAE) rate, and cost with univariate techniques.

Results: A total of 243 cases were identified, 168 in the LI cohort and 75 in the HI cohort. LI patients differed from HI patients by mean age (73.1±0.6 versus 65.9±0.9 years, P<0.01), female gender (19.6% versus 9.3%, P=0.04), high school graduation rate (54.8% versus 97.3%, P<0.01), government health insurance (89.9% versus 72.0%, P<0.01), and presence of coronary artery disease (41.7% versus 28.0%, P=0.04). LI patients had a higher rate of EVAR (47.0% versus 17.3%, P<0.01) associated with a higher total cost ($25,765±1055 versus $19,533±886, P<0.01). There were no differences in mortality or SAE rate.

Conclusions: The equivalent mortality and SAE rate in the higher risk LI cohort is a testament to appropriate risk stratification and access to minimally invasive technology, despite the higher financial burden associated with caring for these patients. Future national healthcare policy must account for heterogeneous resource utilization, as seen in this study.

Author Disclosures: W. M. Bogey: Nothing to disclose; **C. A. Durham**: Nothing to disclose; **B. A. Ehlert**: Nothing to disclose; **E. M. Gronet**: Nothing to disclose; **A. C. Mays**: Nothing to disclose; **M. M. McNally**: Nothing to disclose; **F. M. Parker**: Nothing to disclose; **C. S. Powell**: Nothing to disclose; **M. C. Stoner**: Nothing to disclose.

PS22.

Aortic Wall Compliance Recovery during Intra-Mural Hematoma Healing

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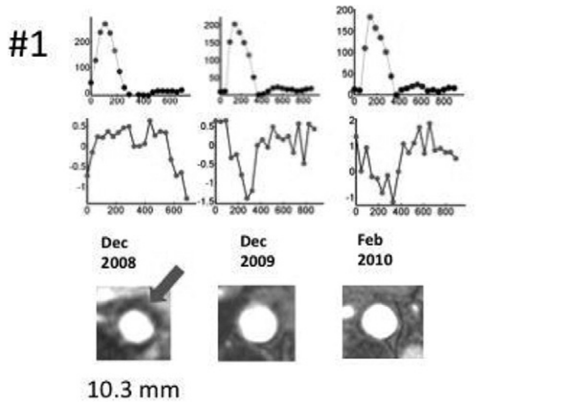
Objectives: To quantify changes in aortic wall compliance with 2D phase contrast magnetic resonance imaging (2D pcMRI) in intramural hematoma (IMH), in order to improve the understanding of IMH and its healing process.

Methods: 2D pcMRI images were analyzed from 8 patients that underwent an MRI at the Acute Aortic Treatment Center of the Methodist Hospital DeBakey Heart & Vascular Center at initial presentation. Of those, 3 were diagnosed with IMH and 5 did not have any aortic disease (baseline). Follow up images were obtained using dynamic MRI scanning at intervals up to 2 years from IMH patients. Aortic wall motion was quantified by maximum extension and contraction and absolute correlation (CC) of temporal average displacement with true lumen aortic flow using 2D pcMRI in axial orientation.

Results: IMH thickness diminished for all cases at follow-up: (#1: from 10.3 to 0 mm, #2 from 10 to 3.6 mm, #3: from 13.1 mm to 10 mm, average: 6.6 mm). Wall compliance as measured by CC increased for case #1 (from 0.21 to 0.4 and 0.5) and #2 (from 0.54 to 0.73) reaching statistical significance at FU 2 and FU 1, respectively. For case #3, CC was statistical significant at presentation (0.87) which did not change significantly at FU (0.62). Maximum contraction and extension varied between 5 mm and −3.1 mm, respectively. Maximum wall motion (sum of contraction and extension) was largest for all cases at FU. For comparison, baseline maximum extension was 2.5 mm, maximum contraction was −2.0 mm and CC was 0.74.

Conclusions: Statistically significant recovery of wall compliance in aortic IMH is seen with IMH healing. Maximum extent of diseased wall motion increased with decreasing IMH thickness.

Author Disclosures: J. E. Anaya-Ayala: Nothing to disclose; **J. Bismuth**: Nothing to disclose; **D. Cassidy**: Nothing to disclose; **M. G. Davies**: Nothing to disclose; **C. Karmonik**: Nothing to disclose; **A. B. Lumsden**: Nothing to disclose; **D. Shah**: Nothing to disclose.



Case	CC flow (p-Value)	thickness [mm]	dmin [mm]	dmax [mm]
#1/In	0.21 (0.2)	10.3	-0.9	4.6
#1/FU1	-0.40 (0.08)	0	-2.5	2.4
#1/FU 2	-0.50 (0.02)	0	-3.1	5.0
#2/In	0.54 (0.01)	10	-0.8	0.5
#2/FU	0.73 (1e-4)	3.6	-2.8	1.1
#3/In	0.87 (1e-4)	13.1	-1.3	1.7
#3/FU	0.61 (1e-3)	10	-2.9	1.1

Aortic flow waveforms (first row, in ml/sec) and average wall motion (second row, in mm) together with axial cross section of aorta and IMH (third row) for IMH patient #1. Arrows denote location where thickness measurement was taken. Number in figure is thickness of IMH. Table presents wall compliance (CC: absolute correlation coefficient with aortic flow waveform, IMH thickness, maximum contraction and maximum extension).

PS24.

Risk Factors for Non-Procedure Related Mortality One Year after Thoracic Endovascular Aortic Repair

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Objectives: Thoracic endovascular aortic repair (TEVAR), although physiologically well tolerated, may fail to confer significant survival benefit in some high-risk patients. This study sought to determine risk factors for one-year non-procedure related mortality after TEVAR.

Methods: A single-institution, prospective cohort review was performed of all patients undergoing TEVAR between 5/2002-12/2010. Univariate analysis and multivariable Cox proportional hazards regression were used to identify risk factors associated with one-year non-operative mortality (NOM), defined as death between post-operative day (POD) 31 and 365. For patients with multiple procedures, the index procedure was used for survival analysis.

Results: 282 patients underwent at least one TEVAR procedure during the study interval; index procedures included descending (n=189), hybrid arch (n=55), and hybrid thoracoabdominal repair (n=38). Mean follow-up was 24±20 months and 100% complete. 30-day/in hospital mortality was 7.4% and one-year NOM was 11.7%. The most common cause of death between POD 31-365 was cardiopulmonary (n=12/33 [36%] late deaths). Univariate predictors of one-year NOM were ASA class ($P<0.001$), BMI ($P=0.004$), aortic diameter ($P=0.005$), weight ($P=0.005$), race ($P=0.011$), history of stroke ($P=0.014$), age ($P=0.019$), and peripheral vascular disease ($P=0.032$). Multivariable modeling (Table 1) demonstrated six independent predictors of one-year NOM, with these variables explaining the majority of risk (C statistic=0.83).

Conclusions: ASA Class 4, white race, male sex, decreased weight, history of stroke, and increased aortic diameter independently predict one-year NOM after TEVAR. These clinical characteristics may help identify patients unlikely to derive long-term survival benefit from TEVAR.

Table 1.

Variable	*Living Group (n = 228)*	*POD 31-1yr Mortality Group (n = 33)*	*Hazard Ratio [95% Confidence Interval]*	*P*
ASA Class (4)	96 (47%)	24 (73%)	3.56 [1.43-8.88]	0.007
Race (white)	142 (62%)	28 (85%)	3.84 [1.44-10.22]	0.007
Sex (male)	131 (57%)	24 (73%)	3.10 [1.30-7.36]	0.010
History of Stroke	20 (9%)	8 (24%)	2.85 [1.24-6.55]	0.014
Weight (kg)	83 ± 19	73 ± 10	0.97 [0.94-0.99]	0.014
Aortic Diameter (cm)	5.52 ± 1.63	6.43 ± 1.92	1.27 [1.03-1.56]	0.023

Author Disclosures: N. D. Andersen: Nothing to disclose; **S. D. Bhattacharya**: Nothing to disclose; **D. M. Craig**: Nothing to disclose; **G. Hughes**: Medtronic, Speaker's bureauGore, Speaker's bureauGore, Research Grants; **R. L. McCann**: Nothing to disclose; **A. A. Shah**: Nothing to disclose; **S. H. Shah**: Nothing to disclose; **J. B. Williams**: Nothing to disclose.

C3b: Poster Session - Aortic Disease (2)

PS26.

Long Term Quality of Life after Endovascular Aneurysm Repair, Compared to Open Repair in Patients with Abdominal Aortic Aneurysms

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Objectives: Although patients undergoing endovascular treatment (EVAR) of their abdominal aortic aneurysm have a better survival and quality of life (QoL) in the first month after surgery, it has been thought that in patients who survive this first month, there is a difference in long term QoL between those who underwent an EVAR and those who received open repair (OR). This assumption was based on the fact that EVAR patients undergo an extensive