Influence of socioeconomic status on postoperative outcomes in acute type A aortic dissection repair

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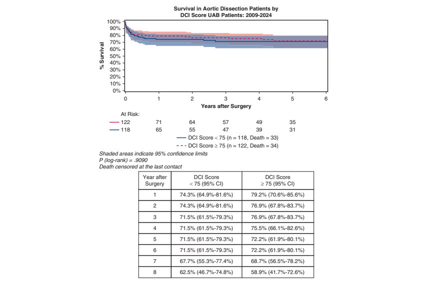
ABSTRACT

Objective: Type A aortic dissection repair is an emergency operation associated with both higher perioperative and postoperative risk. This study investigates the influence of socioeconomic status, as measured by the Distressed Communities Index (DCI), on patients who underwent acute aortic dissection repair and their postoperative outcomes.

Methods: We conducted a retrospective analysis of 240 adult patients who underwent repair for acute Stanford Type A aortic dissection from 2009 to 2021. Patients were categorized into an at-risk group (DCI score $\geq$75) and a not-at-risk group (DCI score $<$75) based on their zip code. We collected demographic, clinical, operative, and postoperative outcomes, analyzing data using descriptive statistics and multivariable logistic regression. Kaplan-Meier survival analysis assessed 5-year survival outcomes.

Results: At-risk patients were significantly younger (52 vs 59 years; $P = .03$) and more commonly African American (59.02% vs 26.5%; $P < .0001$). Although chronic health condition rates were similar, at-risk patients showed trends toward higher rates of postoperative respiratory failure (27.1% vs 18.0%; $P = .0926$) and longer hospital stays (27.05% vs 15.25% for length of stay of 8-13 days; $P = .065$). However, rates of postoperative complications, including 30-day mortality and 5-year survival, were not significantly different between groups, and at-risk status did not significantly predict mortality (hazard ratio, 1.35; 95% CI, 0.65-2.79; $P = .43$).

Conclusions: Patients undergoing urgent surgery for acute Type A aortic dissection have similar postoperative outcomes, although at-risk patients may experience longer hospital stays and higher respiratory failure rates. Further study is necessary to understand the effect of DCI score on intermediate and long-term outcomes to mitigate social disparities and diminish modifiable risk factors. (JTCVS Open 2025;24:332-40)



Year after Surgery	DCI Score < 75 (95% CI)	DCI Score ≥ 75 (95% CI)
1	74.3% (64.9%-81.6%)	79.2% (70.6%-85.6%)
2	74.3% (64.9%-81.6%)	76.9% (67.8%-83.7%)
3	71.5% (61.5%-79.3%)	76.9% (67.8%-83.7%)
4	71.5% (61.5%-79.3%)	75.5% (66.1%-82.6%)
5	71.5% (61.5%-79.3%)	72.2% (61.9%-80.1%)
6	71.5% (61.5%-79.3%)	72.2% (61.9%-80.1%)
7	67.7% (55.3%-77.4%)	68.7% (56.5%-78.2%)
8	62.5% (46.7%-74.8%)	58.9% (41.7%-72.6%)

Kaplan-Meier survival curve for at-risk and not-at-risk cohorts.

CENTRAL MESSAGE

Socioeconomic status in patients undergoing acute Type A aortic dissection repair does not affect early and midterm survival.

PERSPECTIVE

This study reveals trends toward increased postoperative complications in patients from lower socioeconomic backgrounds after Type A aortic dissection repair while demonstrating similar early and midterm survival compared with higher socioeconomic groups. Understanding local patient populations guides future strategies to address health equity and optimize surgical outcomes.

Type A aortic dissection (TAAD) is a life-threatening emergency, with in-hospital mortality rates ranging from 17% to 31% among patients undergoing surgical repair.[1-4]

The link between low socioeconomic status (SES) and adverse postoperative outcomes has been well established, particularly in surgical populations.[5-7] A published report of 20,000 patients undergoing coronary artery bypass grafting demonstrated that SES was an independent risk-adjusted predictor of postoperative mortality.[8] Additionally, in 2020, Mehaffey and colleagues[9] demonstrated that individuals from lower SES neighborhoods had significantly higher rates of predicted mortality and composite morbidity in a population of 575,900 patients undergoing coronary artery bypass grafting.

It has been established in the literature that lower SES can be a driving force of numerous comorbid conditions,

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Abbreviations and Acronyms

DCI = Distressed Communities Index
SES = socioeconomic status
TAAD = Type A aortic dissection

including obesity, diabetes, and metabolic syndrome.[10,11] Rates of hypertension are highest in those who come from a low SES background and lowest in those who come from a high SES background.[12,13]

SES is a multifaceted determinant of health that involves racial, ethnic, community-based, financial, and geographic elements. Given the complex nature of one's own social environment, measuring the true influence of SES is challenging. The Distressed Communities Index (DCI) is a tool developed by the Economic Innovation Group to quantify community-level socioeconomic distress. It includes factors such as education, housing vacancy rates, employment rates, and income, providing a composite measure of socioeconomic vulnerability for neighborhoods, stratified by zip code.[14] The DCI has been used in prior studies to assess the effect of SES on outcomes in cardiac surgery populations.[8,9] The purpose of this study is to describe a population of patients treated for acute TAAD at our institution and evaluate postoperative outcomes in relation to their DCI score, a surrogate of SES.

POPULATION AND METHODS

Study Population

We conducted a retrospective analysis of 240 adult patients who underwent repair of acute Stanford TAAD between 2013 and 2021, with follow-up data collected through September 2024. The institutional review board or equivalent ethics committee of University of Alabama at Birmingham approved the study protocol and publication of data (IRB-091213002; December 31, 2019). The patient(s) provided informed written consent for the publication of the study data. Demographic and clinical information were collected for all patients. Exclusion criteria included missing operative notes or more than 3 missing demographic or clinical data points. Postoperative outcomes assessed included acute renal failure (defined as a creatinine level >4.0 mg/dL or the need for new dialysis), respiratory failure (defined as intubation >72 hours, reintubation, or tracheostomy), stroke, length of stay, reoperations for hemorrhage, mortality within 24 hours, in-hospital mortality, 30-day mortality, and 6-month follow-up.

DCI Score

The DCI score is a geographic-based tool that measures the socioeconomic health of communities using 7 key parameters: education level, housing vacancy rates, employment rates, poverty, income, and establishment changes. This score ranges from 0 (indicating no distress) to 100 (indicating severe distress) and is based on data from the US Census Bureau and the American Community Survey. We used the 2024 DCI dataset, which includes data from 2017 to 2021. Patients were classified into 2 groups: those with a DCI score <75 (not at risk) and those with a score ≥75 (at risk).

Statistical Analysis

Descriptive statistics were used to summarize the patient characteristics. Continuous variables such as age and DCI scores were presented as medians with interquartile ranges (IQRs), whereas categorical variables such as race and surgical classification were presented as frequencies and percentages. Comparisons between groups for continuous variables were performed using the Mann-Whitney *U* test, whereas categorical variables were compared using χ^2 or Fisher exact tests, depending on the data type.

A multivariable parametric hazard analysis was conducted to identify predictors of mortality, with Kaplan-Meier survival curves used to assess long-term survival using a 95% CI. Hazard ratios (HRs) were calculated for variables of interest, including age, surgical complexity, and preoperative conditions.

RESULTS

Patient Characteristics

Among the 240 patients, 122 (50.8%) were classified as at risk based on DCI score. The at-risk group had a significantly lower median age (52 years [IQR, 44-62 years]) compared with the not-at-risk group (59 years [IQR, 47-67 years]; $P = .03$). The at-risk group was also more likely to be African American (59.0% vs 26.5%; $P < .0001$). Rates of hypertension, obesity, smoking, chronic lung disease, and connective tissue disease were similar between the 2 groups (Table 1).

Operative Characteristics

DeBakey Type I aortic dissection was more common than Type II in the entire cohort (190 out of 240 [80.2%]). The at-risk group had a significantly higher rate of DeBakey Type I dissections compared with the not-at-risk group (86.8% vs 73.3%; $P = .009$). Surgical characteristics, such as circulatory arrest use and aortic reconstruction methods, were similar between the 2 groups (Table 2).

Postoperative Outcomes

At-risk patients had a trend toward higher rates of postoperative respiratory failure (27.1% vs 18.0%; $P = .0926$) and longer hospital stays (27.1% vs 15.2%; $P = .065$), but these differences were not statistically significant. Rates of acute renal failure, stroke, reoperation for hemorrhage, perioperative mortality, in-hospital mortality, 30-day mortality, and 6-month follow-up were similar between the groups (Table 3). Kaplan-Meier survival analysis showed similar short and midterm survival (Table 3 and Figure 1).

TABLE 1. Population and cohort characteristics

Variable	Overall	DCI score: Not at risk (n = 118)	DCI score: At risk (n = 122)	P value
Age (y)	55 (45-65)	59 (47-67)	52 (44-62)	.0303
≤45	63 (26.25)	26 (22.03)	37 (30.33)	.0812
45-55	59 (24.58)	24 (20.34)	35 (28.69)	
55-65	62 (25.83)	35 (29.66)	27 (22.13)	
>65	56 (23.33)	33 (27.97)	23 (18.85)	
Female sex	76 (31.67)	35 (29.66)	41 (33.61)	.5112
Race				
White	133 (55.65)	86 (73.50)	47 (38.52)	<.0001
Black	103 (43.10)	31 (26.50)	72 (59.02)	<.0001
Body mass index	29.6 (25.8-34.4)	29.4 (26-33.5)	29.9 (25.8-35.0)	.5356
≤25.8	60 (25.10)	29 (24.79)	31 (25.41)	.7868
25.8-29.6	60 (25.10)	32 (27.35)	28 (22.95)	
29.6-34.4	60 (25.10)	30 (25.64)	30 (24.59)	
>34.4	59 (24.69)	26 (22.22)	33 (27.05)	
Comorbidities				
Hypertension	225 (93.75)	111 (94.07)	114 (93.44)	.8415
Diabetes mellitus	34 (14.23)	16 (13.68)	18 (14.75)	.8113
Connective tissue disease	13 (5.42)	6 (5.08)	7 (5.74)	.4917
Current smoker	83 (34.58)	37 (31.36)	46 (37.70)	.3012
Chronic lung disease	25 (10.42)	9 (7.63)	16 (13.11)	.1641
Intubated	24 (10.13)	19 (16.52)	5 (4.10)	.0015
Cerebral vascular accident	26 (10.83)	12 (10.17)	14 (11.48)	.7449
Coronary artery disease	16 (6.67)	9 (7.63)	7 (5.74)	.5574
Immunocompromised	11 (4.62)	5 (4.27)	6 (4.96)	.8013
Creatinine (mg/dL)	1.2 (1.0-1.5)	1.2 (1.0-1.5)	1.1 (0.9-1.5)	.6171
Lactate (mmol/L)	1.7 (1.1-2.9)	1.9 (1.1-3.2)	1.7 (1.05-2.7)	.3422
Ejection fraction (%)	60 (55-60)	58 (55-60)	60 (55-60)	.2847
<45	19 (13.01)	9 (11.39)	10 (14.93)	.1691
45-59	51 (34.93)	33 (41.77)	18 (26.87)	
≥60	76 (52.05)	37 (46.84)	39 (58.21)	
Any malperfusion	54 (22.59)	25 (21.37)	29 (23.77)	.6570
Tamponade	11 (5.09)	6 (5.45)	5 (4.72)	.8053
Shock*	30 (12.61)	15 (12.93)	15 (12.30)	.8825
In extremis	9 (3.93)	7 (6.09)	2 (1.75)	.1710
Family history of aortic disease				.4917
Aneurysm	2 (0.84)	2 (1.69)	0 (0.00)	
None	99 (41.42)	50 (42.37)	49 (40.50)	
Unknown	138 (57.74)	66 (55.93)	72 (59.50)	

Values are presented as mean (± standard deviation [SD], median (interquartile range) or n (%). *DCI*, Distressed Communitites Index. *Defined as systolic blood pressure <90 mm Hg.

Predictors of Mortality

Distressed community status, as reflected by the DCI score, was not a significant predictor of mortality in either the early (<6 months) or constant (≥6 months) postoperative periods (Figure 2). However, several other factors were significant predictors of early phase mortality, including age >65 years (HR, 14.16; 95% CI, 4.88-41.08; *P* < .0001), circulatory arrest time >33 minutes (HR, 4.59; 95% CI, 1.93-10.92; *P* < .001), crossclamp time 84.5 to 120.5 minutes (HR, 11.16; 95% CI, 2.63-47.26), crossclamp time >120.5 minutes (HR, 10.91; 95% CI, 2.75, 43.31; *P* < .001), and malperfusion (HR, 7.26; 95% CI, 2.85-18.53; *P* < .0001) (Figure 3). In the constant phase, significant predictors of mortality included zone 2 aortic reconstruction and presentation in extremis (Table 4).

DISCUSSION

In this single-center study, at-risk patients with higher DCI score indicating lower SES had statistically similar rates of postoperative complications as well as in-hospital,

TABLE 2. Surgical characteristics

Variable	Overall	DCI score: Not at risk (n = 118)	DCI score: At risk (n = 122)	*P* value
Type				.0092
Debakey Type I	190 (80.17)	85 (73.28)	105 (86.78)	
Debakey Type II	47 (19.83)	31 (26.72)	16 (13.22)	
Distal aorta				.1577
Hemiarch	186 (77.8)	85 (72.0)	101 (83.5)	
Partial or total arch	12 (5.0)	8 (6.8)	4 (3.3)	
Frozen elephant trunk procedure	26 (10.9)	17 (14.4)	9 (7.4)	
Ascending	15 (6.3)	8 (6.8)	7 (5.8)	
Distal suture zone				.6155
0	207 (91.6)	99 (89.2)	108 (93.9)	
1	2 (0.9)	1 (0.9)	1 (0.9)	
2	14 (6.2)	9 (8.1)	5 (4.4)	
3	3 (1.3)	2 (1.8)	1 (0.9)	
Type of cerebral perfusion				.1713
None	67 (27.9)	32 (27.1)	35 (28.7)	
Nonselective antegrade	118 (49.2)	54 (45.8)	64 (52.5)	
Selective antegrade	44 (18.3)	28 (23.7)	16 (13.1)	
Retrograde	11 (4.6)	4 (3.4)	7 (5.7)	
Redo sternotomy	8 (3.33)	3 (2.54)	5 (4.10)	.4789
Proximal aorta				
Aortic valve or root replacement	49 (20.42)	24 (20.34)	25 (20.49)	.9766
Cardiopulmonary bypass time (min)	145 (113.5-183)	147 (116-187)	144 (110-182)	.5511
≤113.5	60 (25.00)	24 (20.34)	36 (29.51)	.3398
113.5-145	61 (25.42)	34 (28.81)	27 (22.13)	
145-183	60 (25.00)	29 (24.58)	31 (25.41)	
>183	59 (24.58)	31 (26.27)	28 (22.95)	
Crossclamp time (min)	84.50 (56.00-120.50)	86.00 (53.00-125.00)	84.00 (57.00-116.00)	.8532
≤56	60 (25.0)	31 (26.3)	29 (23.8)	
56-84.5	60 (25.0)	27 (22.9)	33 (27.1)	
84.5-120.5	60 (25.0)	28 (23.7)	32 (26.2)	
>120.5	60 (25.0)	32 (27.1)	28 (23.0)	
Circulatory arrest temperature (°C)	28 (20-28)	28 (21-31)	27.5 (20-29)	.3728
≤20	57 (26.89)	25 (25.00)	32 (28.57)	.5582
>20	155 (73.11)	75 (75.00)	80 (71.43)	
Cerebral perfusion time (min)	21 (16-30)	21 (16-30)	21 (16-30)	.7777
≤16	41 (25.79)	21 (25.93)	20 (25.64)	.5134
16-21	43 (27.04)	24 (29.63)	19 (24.36)	
21-30	37 (23.27)	15 (18.52)	22 (28.21)	
>30	38 (23.90)	21 (25.93)	17 (21.79)	
Body circulatory arrest time (min)	23.00 (18.00-33.00)	23.00 (17.00-31.00)	23.00 (18.00-34.00)	.2904
≤18	56 (28.9)	31 (32.6)	25 (25.3)	.6309
18-23	44 (22.7)	19 (20.0)	25 (25.3)	
23-33	48 (24.7)	24 (25.3)	24 (24.2)	
>33	46 (23.7)	21 (22.1)	25 (25.3)	

Values are presented as mean (± standard deviation [SD], median (interquartile range), or n (%). *DCI*, Distressed Communities Index.

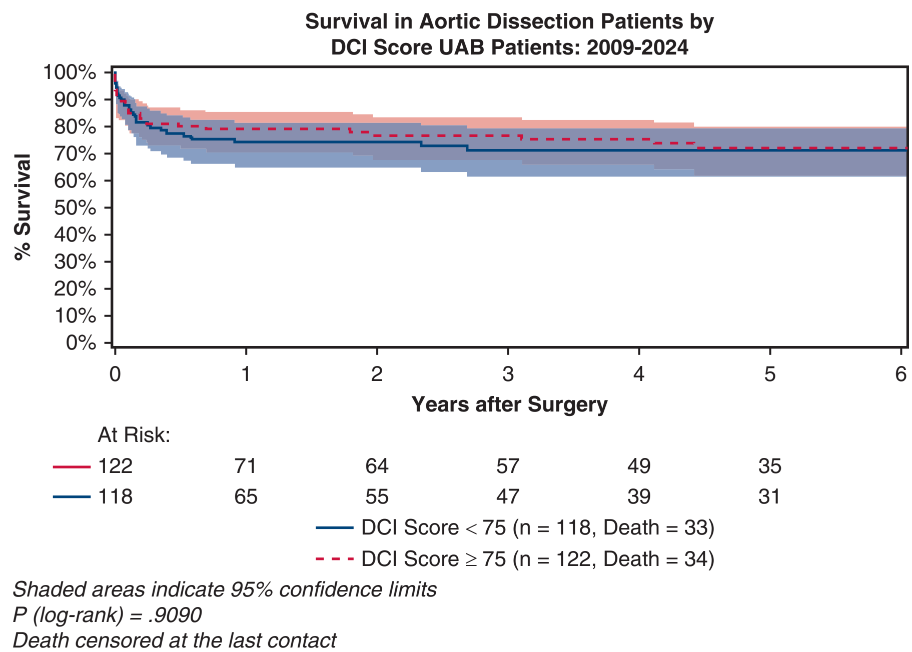
short-term, and intermediate-term mortality compared with not-at-risk patients. This study is the first to show equipoise in cardiac surgery outcomes when comparing patients of different socioeconomic strata.[15-17]

Our cohort of at-risk patients were younger and more often African American. Lower SES is associated with decreased life expectancy,[18] poorer access to care,[19] and delays in hypertension treatment in younger patients.[20] Race is associated with poorer access to care[21-23] and worse outcomes after cardiac surgery.[24-26] We believe that surgical equanimity at the face of acute aortic pathology may be a balancing force in this population

TABLE 3. Outcomes stratified by Distressed Communities Index (DCI) risk

Variable	Overall	DCI score: Not at risk (n = 118)	DCI score: At risk (n = 122)	*P* value
Reoperation secondary to hemorrhage	12 (5.0)	5 (4.3)	7 (5.7)	.6043
Perioperative mortality (<24 h)	4 (1.7)	1 (0.9)	3 (2.5)	.6221
Acute renal failure*	33 (13.9)	13 (11.2)	20 (16.4)	.2472
Postoperative cerebrovascular accident	28 (11.7)	15 (12.8)	13 (10.7)	.6029
Prolonged intubation	54 (22.6)	21 (18.0)	33 (27.1)	.0926
In-hospital mortality	34 (14.2)	18 (15.3)	16 (13.1)	.6347
Length of stay group				.0647
≤5	65 (27.08)	32 (27.12)	33 (27.05)	
5-8	70 (29.17)	42 (35.59)	28 (22.95)	
8-13	51 (21.25)	18 (15.25)	33 (27.05)	
30-d mortality	34 (14.5)	17 (14.8)	17 (14.3)	.9141
6-mo follow-up	151 (62.9)	72 (61.0)	79 (64.8)	.5490

Values are presented as n (%). *HD*, Hemodialysis. *Defined as creatinine > 4.0 mg/dL, new continuous veno-venous hemofiltration, or HD.



Year after Surgery	DCI Score < 75 (95% CI)	DCI Score ≥ 75 (95% CI)
1	74.3% (64.9%-81.6%)	79.2% (70.6%-85.6%)
2	74.3% (64.9%-81.6%)	76.9% (67.8%-83.7%)
3	71.5% (61.5%-79.3%)	76.9% (67.8%-83.7%)
4	71.5% (61.5%-79.3%)	75.5% (66.1%-82.6%)
5	71.5% (61.5%-79.3%)	72.2% (61.9%-80.1%)
6	71.5% (61.5%-79.3%)	72.2% (61.9%-80.1%)
7	67.7% (55.3%-77.4%)	68.7% (56.5%-78.2%)
8	62.5% (46.7%-74.8%)	58.9% (41.7%-72.6%)

FIGURE 1. Kaplan-Meier survival curves for patients undergoing aortic dissection by Distressed Communities Index (*DCI*) risk group (2009-2024) (N = 240). *UAB*, University of Alabama at Birmingham.

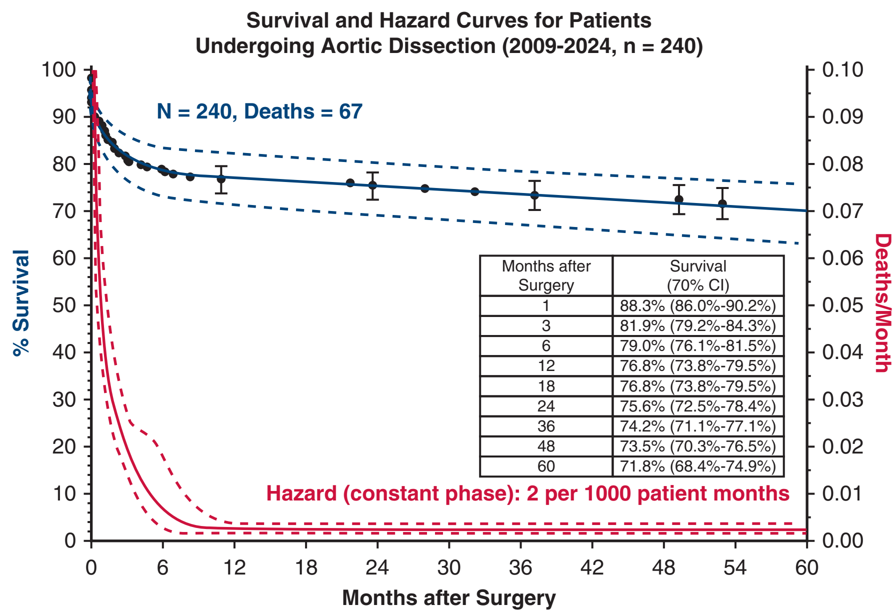


FIGURE 2. Survival and hazard curves for patients undergoing aortic dissection from 2009 to 2024 (N = 240). This figure illustrates the survival and risk of death (hazard) over time for our study population.

and likely mitigates race-associated disparities in health care access.

Social determinants of health are related to the patient's financial stability, social environment, education status, and health care access and may ultimately influence hospital length of stay.[27,28] Although a higher rate of medical comorbidities and postsurgical complications could explain prolonged hospitalization among those with poorer access to care, our patient cohorts had similar rates of both. It is more likely that barriers to safe discharge such as home unsuitability, limited social support, or resource-intensive discharge planning contributed to this discrepancy. Naturally, these data are difficult to track on a retrospective basis and further efforts to identify these barriers prospectively are needed.

Those studies show those from poorer SES have increased rates of multiple comorbid conditions.[10,11,29] Although the rates of comorbidities were similar between the at-risk and not-at-risk groups, the severity of comorbidities could have been greater among at-risk patients, which would have contributed to a longer hospital stay.

There are innumerable preoperative, intraoperative, and postoperative factors that can increase the risk for respiratory failure after aortic dissection repair.[30-32] In a multihospital retrospective study by Dyas and colleagues,[33] high social vulnerability was associated with increased risk for postoperative respiratory complications even when accounting for perioperative factors like emergency status and sepsis. For cardiac surgery specifically, Preventza and colleagues[34] observed an association of lower SES background and higher rates of respiratory failure, particularly among women. In a retrospective study utilizing the Nationwide Readmissions Database and the median household income quartile to stratify SES, the authors found that low SES was associated with higher admissions rates for respiratory complications.[35] These findings highlight that low SES may predispose patients to respiratory complications potentially due to preexisting risk factors like smoking and poor physical conditioning or environmental factors like pollutants that negatively influence baseline lung function.[36,37]

Despite higher DCI scores, this at-risk cohort who underwent TAAD repair exhibited no statistically significant difference in short-term and intermediate-term mortality. Multivariate analysis revealed that DCI score was not associated with increased mortality rate. However, older age, zone 2 dissection, malperfusion, crossclamp time, circulatory arrest time, smoking status at time of dissection, body mass index, and presenting in extremis were associated with increased mortality.

There have been studies to explore the influence of SES on outcomes after thoracic aortic surgery broadly.[34] In a study by Strobel and colleagues,[38] an increased mortality risk was observed for patients who have 1 or more complications after cardiac surgery if their DCI score is >60. Additionally, a study by Li and colleagues[39] looking at patients undergoing TAAD repair revealed that patients living in the lowest quartile of median income for a particular zip code had an increased mortality risk compared with the highest quartile. Our current study is consistent with previously published reports showing that low SES is not associated with any differences in mortality risk, but the authors

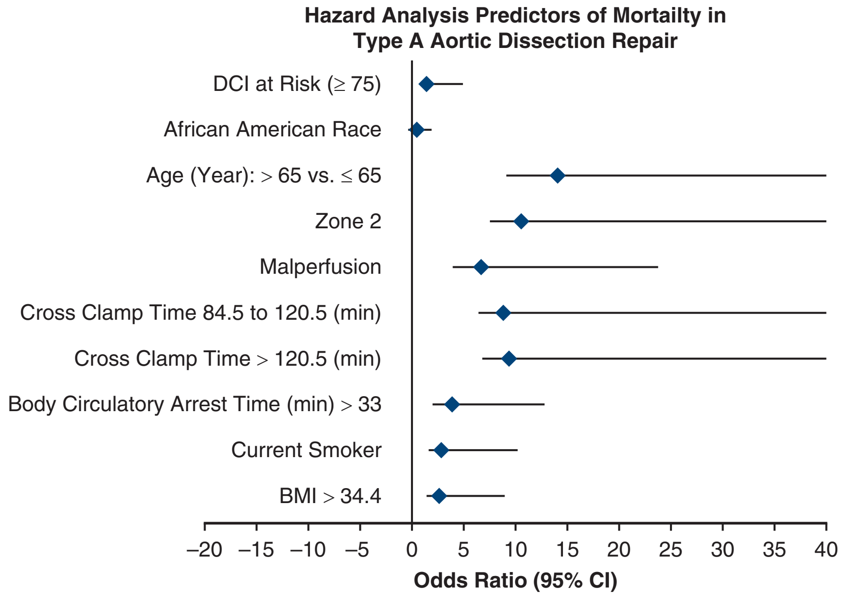


FIGURE 3. Forest plot of parametric hazard multivariable analysis of early-phase mortality in patients with Aortic Dissection (2009-2024) (N = 240). This forest plot shows predictors of mortality in patients undergoing Type A aortic dissection repair. *DCI*, Distressed Communities Index; *BMI*, body mass index.

did demonstrate that lower SES was associated with higher rates of readmission.[39] We speculate that the acute intervention of aortic dissection repair is an equalizing event; at high-volume centers there may not be observable differences in surgical mortality, yet the environmental and social stressors of living in an at-risk DCI community may manifest as differing rates of complications. Additional research is necessary to identify risk factors associated with disparate outcomes among vulnerable individuals living in distressed communities, especially in those with aortic pathology, which requires lifelong medical management and surveillance.

Limitations

This study has several limitations inherent to its retrospective design. First, it is a single-center study conducted at a tertiary referral center in the state of Alabama, which may not be generalizable to other populations. Second, retrospective study inhibits accurate assessment of inpatient and follow-up data. Because our institution is a referral center for aortic surgery, there is not only selection but survival bias inherent in our patient cohort. Additionally, variations in surgical technique, perioperative management, and patient selection over surgeon and over time may influence postoperative outcomes. The DCI score is a comprehensive

TABLE 4. Parametric hazard multivariable analysis of mortality in patients with aortic dissection, 2009-2024 (N = 240)

	Early phase		Constant phase	
Predictor	Hazard ratio (95% CI)	*P* value	Hazard ratio (95% CI)	*P* value
Distressed Communities Index Score: At risk (≥75)	1.59 (0.73-3.47)	.25	0.96 (0.39-2.38)	.93
African American race	0.60 (0.25-1.47)	.27	1.65 (0.65-4.17)	.29
Age >65 y vs ≤65 y	14.16 (4.88-41.08)	<.0001		
Zone 2	11.71 (3.27-41.94)	.0002	8.04 (2.38-27.20)	<.001
Malperfusion	7.26 (2.85-18.53)	<.0001		
Crossclamp time 84.5-120.5 min	11.16 (2.63-47.26)	.001		
Crossclamp time >120.5 min	10.91 (2.75-43.31)	<.001		
Body circulatory arrest time >33 min	4.59 (1.93-10.92)	<.001		
Current smoker	3.33 (1.29-8.59)	.01		
Body mass index >34.4	2.84 (1.20-6.72)	.02		
In extremis			18.78 (4.59-76.85)	<.0001

measure of community-level distress, it does not capture all aspects of SES, such as access to health care, social support, or specific environmental stressors. Accuracy of individual SES assessment could be enhanced by individual confirmation of SES-specific variable such as insurance status, current access to health care, and employment status.

CONCLUSIONS

Our study contributes to the limited body of research regarding the effects of community distress on outcomes following TAAD repair. We demonstrated that patients from at-risk communities have similar rates of postoperative complications as well as short- and intermediate-term mortality compared with those from not-at-risk communities. Aortic dissection can be challenging to manage because of significant variability in its presentation, extent, and severity. Similarly, SES is a multifaceted aspect of humanity that also manifests certain challenges in health outcomes. Continued study is necessary to understand the effects of DCI on aortic outcomes. Aortic centers have the requisite patient volume and surgical experience to optimize patient outcomes and diminish modifiable risk factors.

Conflict of Interest Statement

The authors reported no conflicts of interest.

The *Journal* policy requires editors and reviewers to disclose conflicts of interest and to decline handling or reviewing manuscripts for which they may have a conflict of interest. The editors and reviewers of this article have no conflicts of interest.

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