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Department of Surgery

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# Treatment of Acute Aortic Dissection at a Community Hospital: A 10 Year Review of Outcomes.

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## BACKGROUND

An aortic dissection is a potentially life threatening condition. A dissection forms when a tear occurs in the intima, the inner layer of tissue in the aorta. Blood flows through the tear causing the separation of the intima and media causing an aneurysm. Using the Stanford classification system, a type A dissection occurs in the ascending aorta and a type B dissection occurs in the descending aorta.

**Table 1. Demographics**

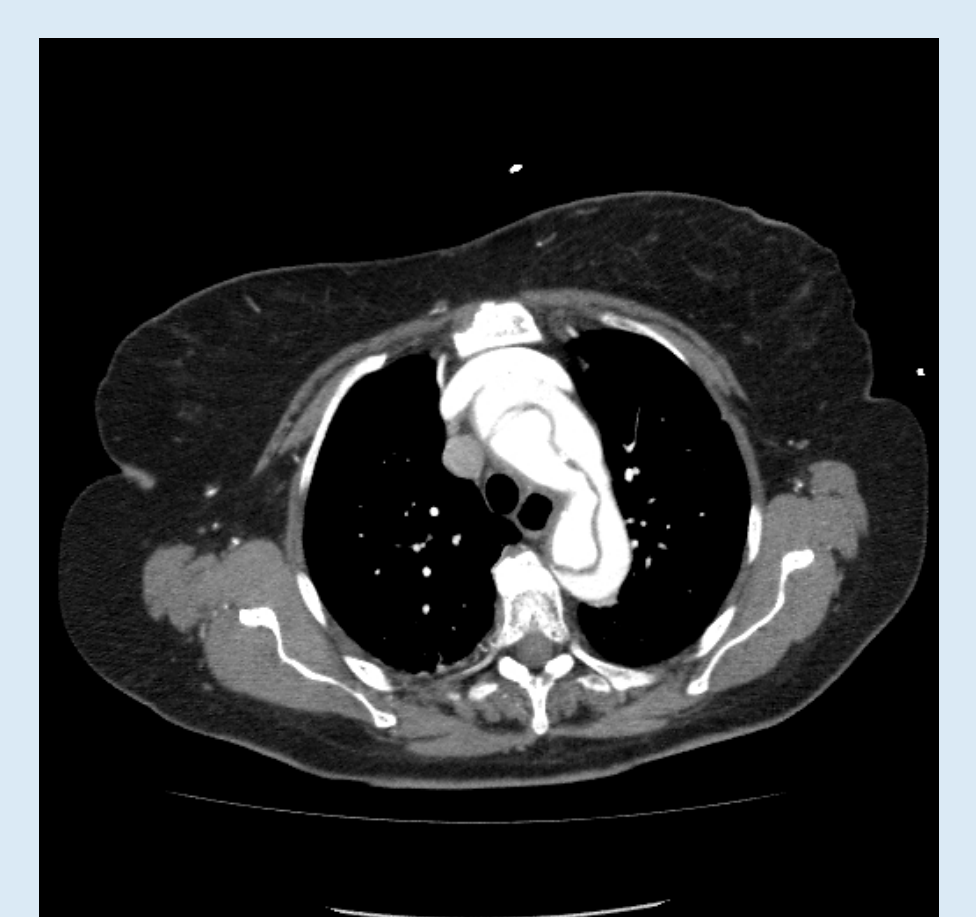
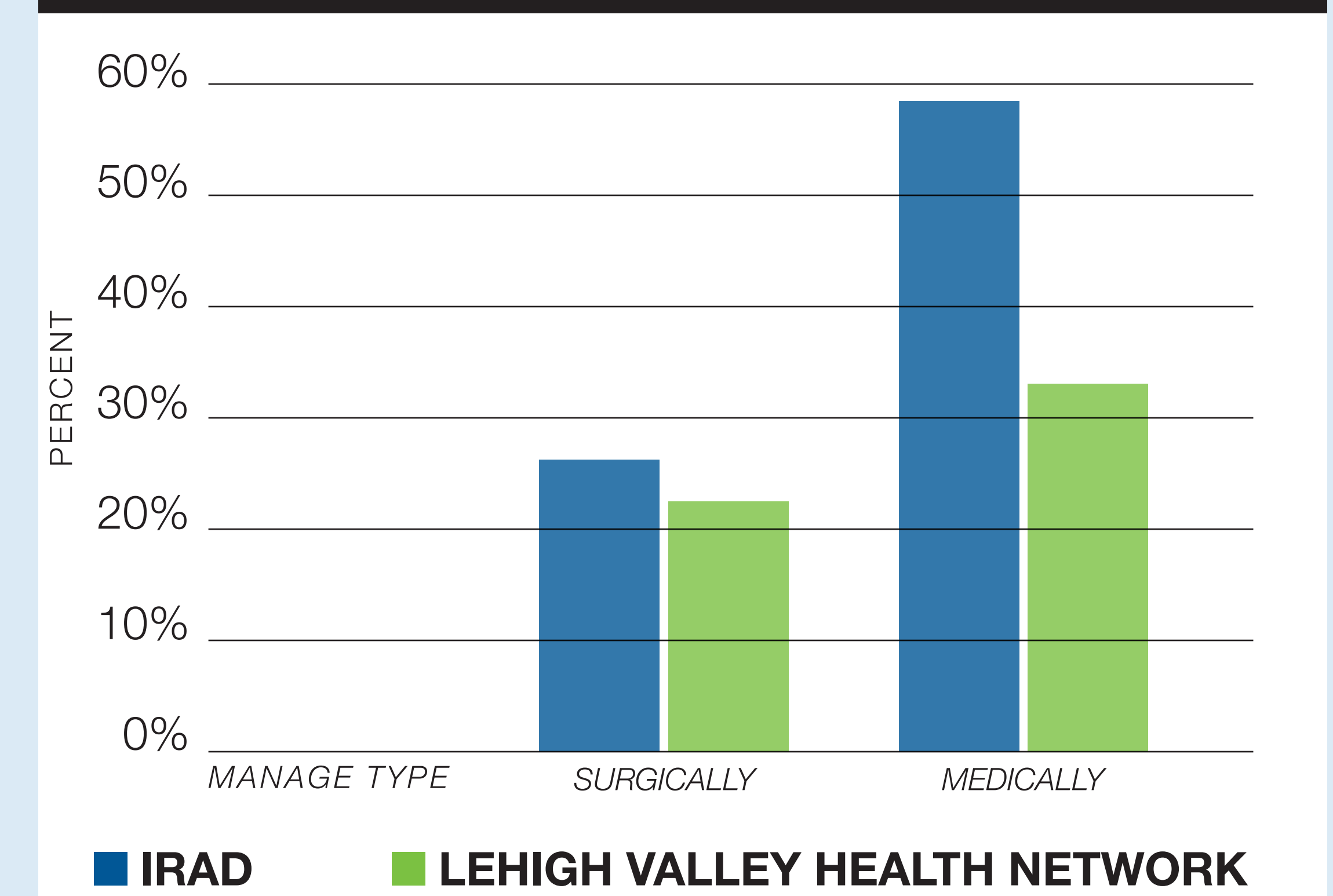
Variable	(n=206)	%
Age ≥ 70	105	0.510
Gender (F)	79	0.380
<b>TYPE A</b>	<b>87</b>	<b>0.422</b>
Surgical	66	0.759
Non-operative	21	0.241
Prohibitive risk	12	0.571
Palliative care	4	0.190
Transferred	3	0.143
AMA	1	0.833
Death before surgery	1	0.833
<b>TYPE B</b>	<b>119</b>	<b>0.578</b>
Immediate surgery	21	0.176
Medical Therapy	98	0.824

**Table 2. In-hospital complications in patients with type A dissection**

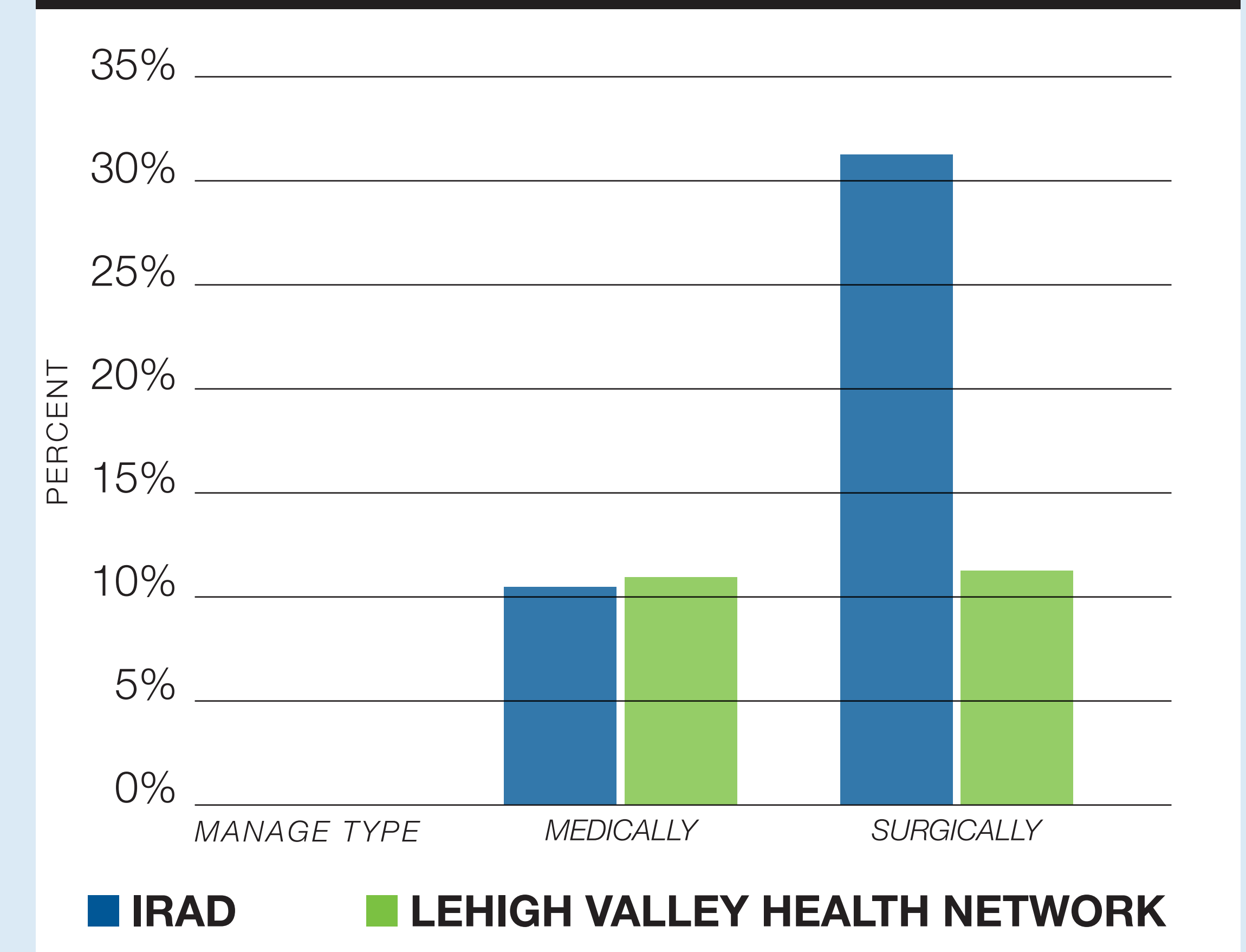
Complications	No.	Incidence overall (n=87) (%)
Acute Renal Failure	23	26.43
Stroke	16	18.39
<b>Surgical treatment (n=66) (%)</b>		
Acute Renal Failure	22	25.28
Stroke	15	17.23
<b>Non-Surgical treatment (n=21) (%)</b>		
Acute Renal Failure	1	24.76
Stroke	1	4.76

## RESULTS IN FIGURES

**Type A Aortic Dissection Mortality Rate**



**Type B Aortic Dissection Mortality Rate**



**Table 3. In-hospital complications in patients with type B dissection**

Complications	No.	Incidence (n=119) (%)
Acute Renal Failure	36	30.25
Stroke	9	7.56

**Table 4. 30 day survival**

Variable	Total	%
Type A Dissection	62	71.26
Surgical	50	75.75
Medical	11	52.38
Type B Dissection	108	90.75

## RESULTS

Of the 89 patients who were diagnosed with a type A dissection, 68 were managed surgically and 21 medically. 15 patients expired, 22.06%, who were managed surgically. 7 patients treated medically, 33.33%, were pronounced in-hospital. Of those diagnosed with a type B dissection, 18 were treated surgically and 101 medically. Surgically, 2 patients, 11.11% expired during their stay. 11 patients were pronounced, 10.89%, who were treated medically during their stay. Hypertension and unstable angina were found to have the highest incidence rate in patients admitted. Atrial fibrillation and acute renal failure were among most prevalent complications.

## CONCLUSION

After reviewing the results and comparing them to the International Registry of Acute Aortic Dissections (IRAD), it is clear that the decisions and treatment of patients at Lehigh Valley Health Network is of a high quality and is on par with other major institutions. While there are still major risk factors and complications, i.e. hypertension, unstable angina, acute renal failure, and atrial fibrillation, the outcomes of patients presented to this institution fared well.

## METHOD

Data consisting of both type A and B aortic dissections were queried from the Lehigh Valley Health Network's database. This resulted in 208 patients from 2000 to 2010. These 208 patients (ages 28-95), 89 were documented as having a type A dissection and 119 having a type B dissection. These categories were further separated based on whether the dissection was surgically or medically managed and the outcome.