**Excel Portfolio Project:**

Health Data Analysis in Pakistan
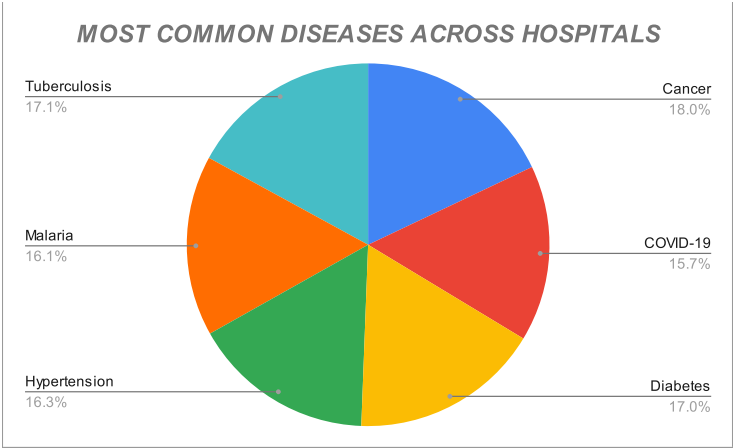
Hospital Statistics: What is the distribution of patients across different hospitals?

Hospital Name	COUNTA of Patient N
Lady Reading Hospital	165
Pakistan Institute of Medica	147
Holy Family Hospital	145
Shifa International Hospital	140
Punjab Institute of Cardiolo	138
Shaukat Khanum Memorial	134
Mayo Hospital	134
Aga Khan University Hospit	134
Indus Hospital	131
Civil Hospital Karachi	130
Liaquat National Hospital	128
Shaikh Zayed Hospital	123
Jinnah Postgraduate Medic	122
Services Hospital	118
Nishtar Hospital	111
Grand Total	**2000**

DISTRIBUTION OF PATIENTS ACROSS HOSPITALS
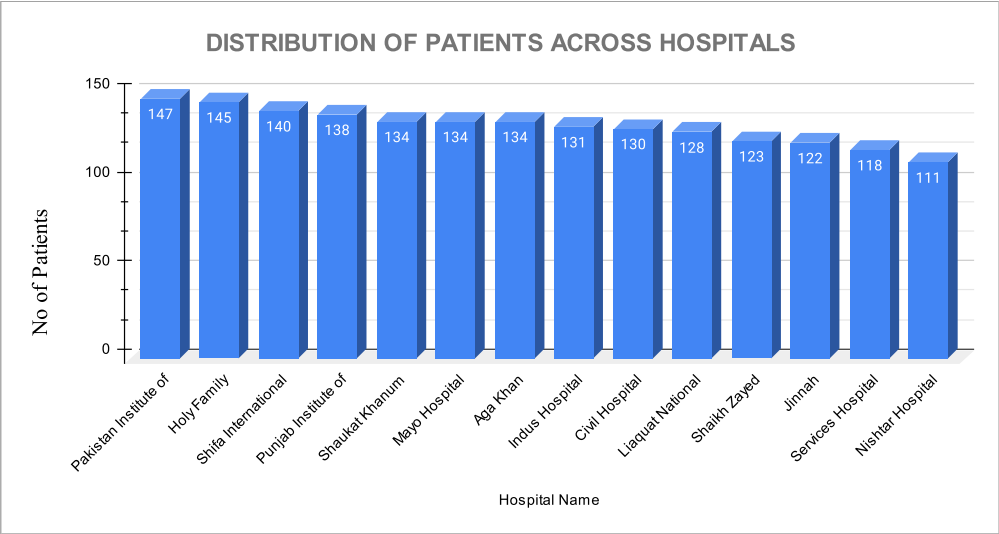
Disease Frequency: What are the most common diseases treated in these hospitals?

Disease	COUNTA of Patient N
Cancer	359
COVID-19	314
Diabetes	339
Hypertension	325
Malaria	322
Tuberculosis	341

MOST COMMON DISEASES ACROSS HOSPITALS

Tuberculosis 17.1%

Cancer 18.0%

Malaria 16.1%

COVID-19 15.7%

Hypertension 16.3%

Diabetes 17.0%
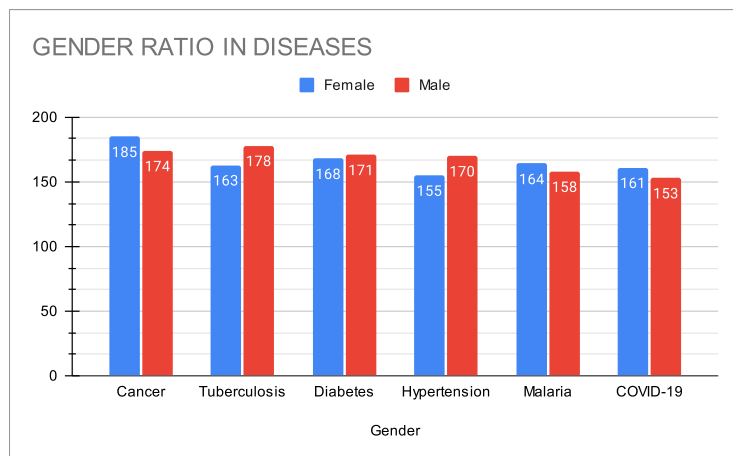
Age Distribution: What is the age distribution of patients in each hospital?

COUNTA of Patient Name	Age Range					
Hospital Name	0-17	18-29	30-39	40-49	50-59	60+
Aga Khan University Hospit	24	18	12	13	15	52
Civil Hospital Karachi	18	13	15	9	16	59
Holy Family Hospital	25	16	15	16	16	57
Indus Hospital	21	7	13	18	18	54
Jinnah Postgraduate Medic	26	13	8	12	11	52
Lady Reading Hospital	31	21	20	14	17	62
Liaquat National Hospital	17	18	20	7	13	53
Mayo Hospital	30	13	15	12	17	47
Nishtar Hospital	21	14	12	12	4	48
Pakistan Institute of Medica	29	19	13	17	12	57
Punjab Institute of Cardiolo	24	19	17	7	13	58
Services Hospital	18	13	14	13	11	49
Shaikh Zayed Hospital	20	9	9	21	9	55
Shaukat Khanum Memorial	19	16	15	14	14	56
Shifa International Hospital	21	18	11	14	14	62

**Gender Ratio:** What is the gender ratio of patients for each disease?

COUNTA of Patient Name	Disease					
Gender	Cancer	Tuberculosis	Diabetes	Hypertension	Malaria	COVID-19
Female	185	163	168	155	164	161
Male	174	178	171	170	158	153
Grand Total	**359**	**341**	**339**	**325**	**322**	**314**

Insurance Coverage: What percentage of patients had insurance coverage?

Insurance	COUNTA of Patient N
Yes	1014
No	986
Grand Total	**2000**

PATIENTS WITH AND WITHOUT INSURANCE

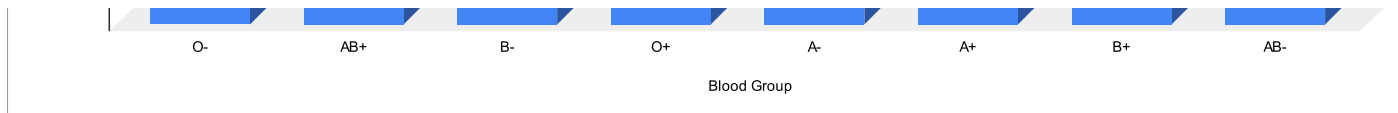| | No | 986 | 1014 | Yes |
| 49.3% | | | | 50.7% |
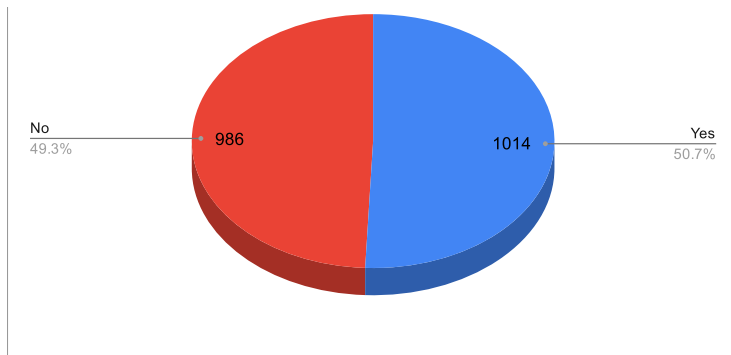
Blood Group Distribution: What is the distribution of blood groups among the patients?

Blood Group	COUNTA of Patient N
O-	278
AB+	268
B-	250
O+	247
A-	247
A+	245
B+	243
AB-	222

BLOOD GROUP DISTRIBUTION

278 268 250 247 247 245 243 222

Blood Group
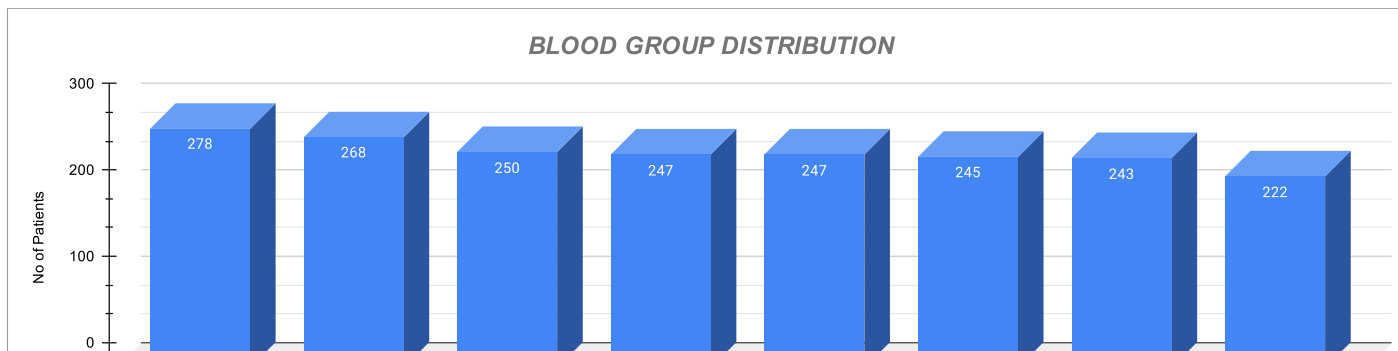
Treatment Cost Analysis: What is the average treatment cost for each disease?

Disease	AVERAGE of Treatme
Diabetes	252,040.00
Hypertension	250,395.84
Cancer	249,268.85
Malaria	248,504.55
Tuberculosis	247,079.00
COVID-19	241,035.52
Grand Total	**248,133**

AVERAGE TREATMENT COST FOR EACH DISEASE

Disease	Value
Diabetes	252,040.00
Hypertension	250,395.84
Cancer	249,268.85
Malaria	248,504.55
Tuberculosis	247,079.00
COVID-19	241,035.52
Grand Total	248,132.64
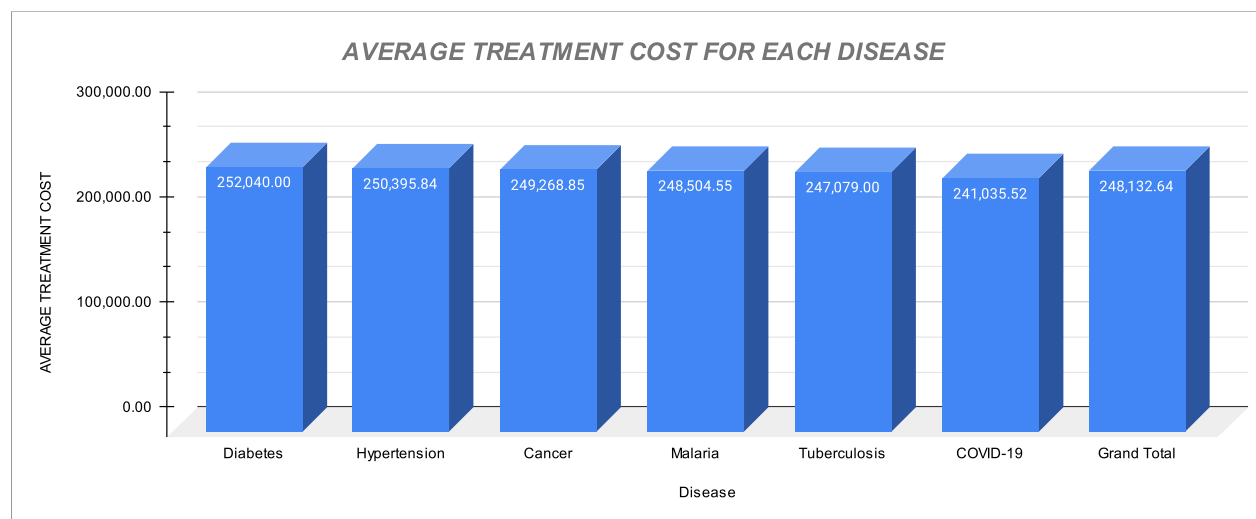
City-wise Patient Count: How many patients are from each city?

City	COUNTA of Patient N
Multan	268
Faisalabad	258
Karachi	253
Islamabad	252
Lahore	249
Rawalpindi	245
Peshawar	242
Quetta	233

PATIENTS FROM EACH CITY
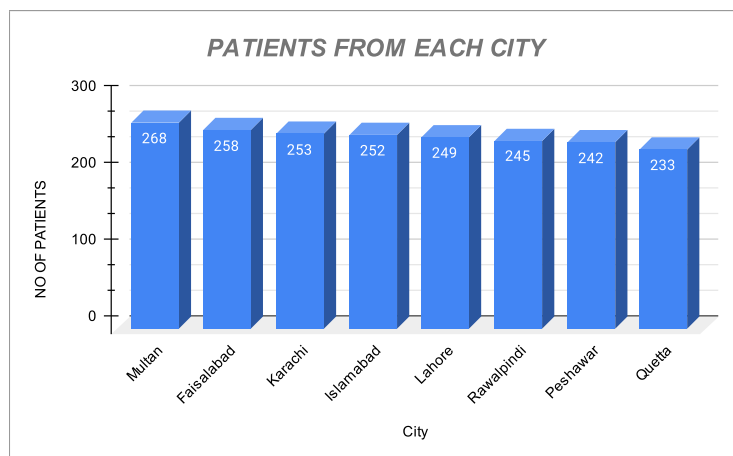
Province-wise Patient Count: How many patients are from each province?

Province	COUNTA of Patient N
Sindh	505
Khyber Pakhtunkhwa	500
Balochistan	499
Punjab	496

COUNTA of Patient Name

| | Sindh 25.3% |
| Punjab 24.8% | |
| Balochistan 25.0% | Khyber Pakhtunkhwa 25.0% |
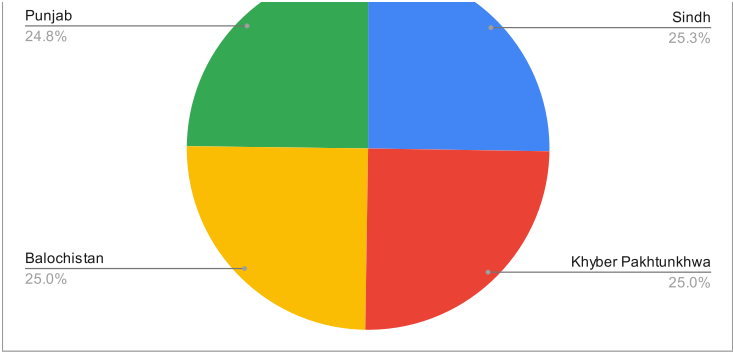
Height and Weight Statistics: What is the average height and weight of patients in each hospital?

Hospital Name	AVERAGE of Height	AVERAGE of Weight
Aga Khan University Hospi	169	81
Civil Hospital Karachi	171	77
Holy Family Hospital	171	79
Indus Hospital	171	80
Jinnah Postgraduate Medic	171	80
Lady Reading Hospital	168	81
Liaquat National Hospital	172	78
Mayo Hospital	171	78
Nishtar Hospital	169	81
Pakistan Institute of Medica	170	80
Punjab Institute of Cardiolo	171	79
Services Hospital	171	79
Shaikh Zayed Hospital	168	81
Shaukat Khanum Memorial	171	84
Shifa International Hospital	171	78

AVERAGE OF PATIENTS HEIGHT AND WEIGHT

● AVERAGE of Height (cm)   ● AVERAGE of Weight (kg)
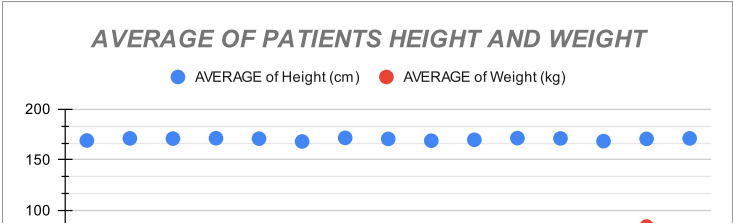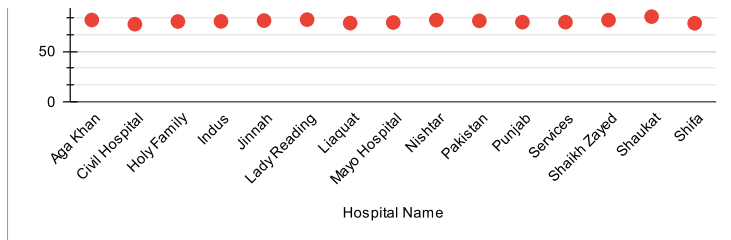
Treatment Cost by Hospital: How does the average treatment cost vary across different hospitals?

| Hospital Name	AVERAGE of Treatme
Mayo Hospital	266,666
Shaukat Khanum Memorial	265,875
Aga Khan University Hospi	264,980
Services Hospital	260,239
Lady Reading Hospital	259,920
Shaikh Zayed Hospital	258,269
Liaquat National Hospital	252,572
Jinnah Postgraduate Medic	244,359
Holy Family Hospital	241,188
Shifa International Hospital	239,466
Punjab Institute of Cardiolo	239,105
Pakistan Institute of Medica	236,607
Nishtar Hospital	236,582
Indus Hospital	228,396
Civil Hospital Karachi	226,452
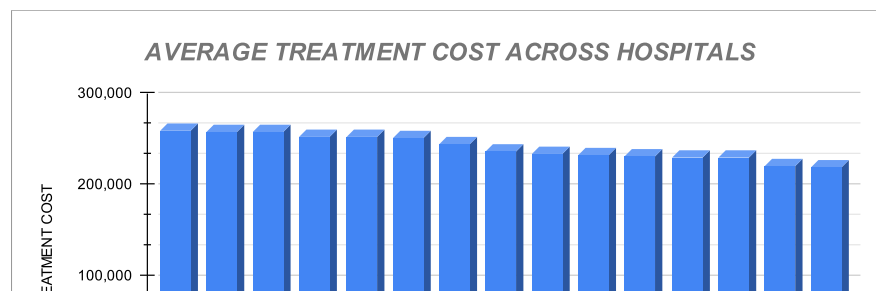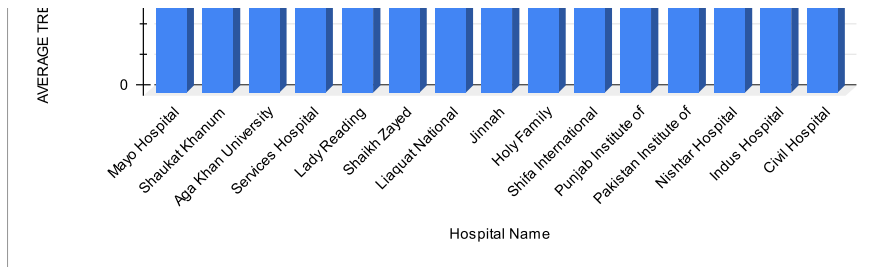
Patient Age vs. Treatment Cost: Is there a correlation between the age of patients and the treatment cost?

Age	AVERAGE of Treatme
1	245,588
2	362,478
3	174,334
4	224,607
5	296,222
6	251,419
7	269,463
8	252,763
9	211,048
10	281,849
11	269,674
12	275,933
13	260,679
14	258,023
15	238,123
16	224,393
17	197,404
18	233,556
19	267,644
20	181,657
21	321,838
22	235,780
23	189,458
24	259,046
25	228,707
26	249,738
27	313,375
28	274,297
29	259,618

CORRELATION BETWEEN AGE & TREATMENT COST
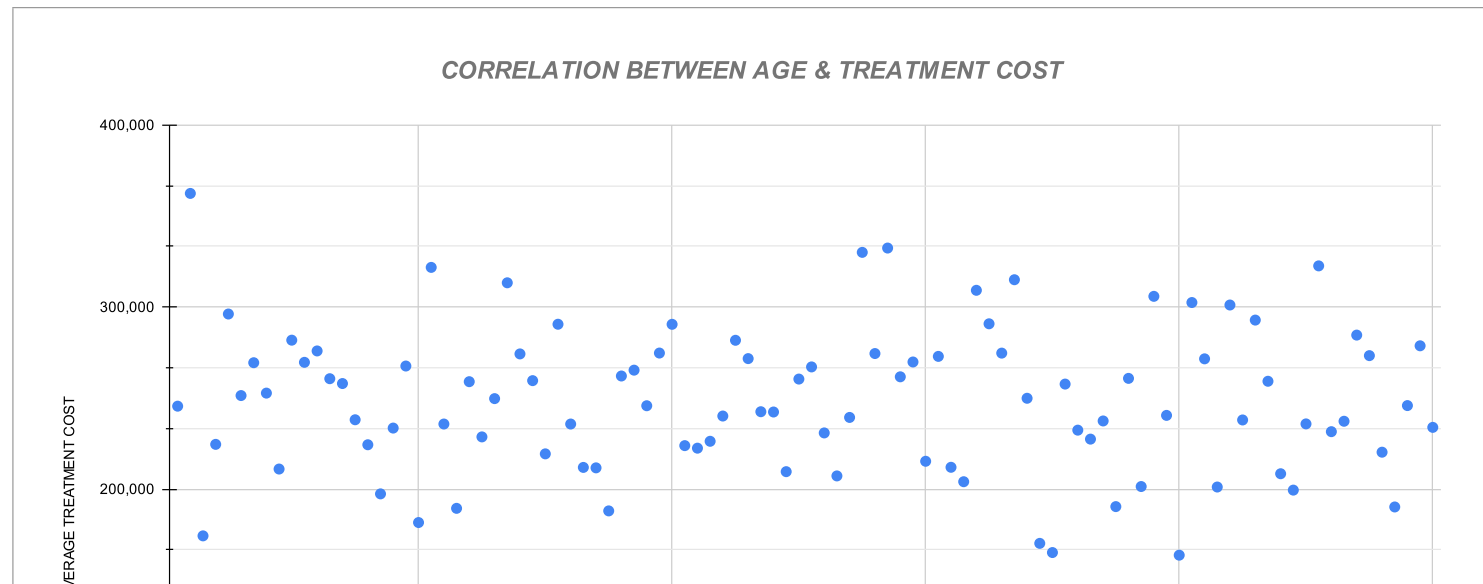
30	219,388
31	290,599
32	235,777
33	211,940
34	211,701
35	188,051
36	262,166
37	265,372
38	245,827
39	274,773
40	290,561
41	223,910
42	222,515
43	226,295
44	240,172
45	281,785
46	271,723
47	242,543
48	242,384
49	209,608
50	260,480
51	267,154
52	230,889
53	207,264
54	239,403
55	330,094
56	274,504
57	332,461
58	261,720
59	269,864
60	215,314
61	272,942
62	212,008
63	204,083
64	309,247
65	290,848
66	274,736
67	315,058
68	249,928
69	170,213
70	165,167
71	257,726
72	232,414
73	227,483
74	237,463
75	190,409
76	260,859
77	201,439
78	305,931
79	240,526
80	163,726
81	302,533
82	271,596

AV

100,000

0

20   40   60   80   100

Age
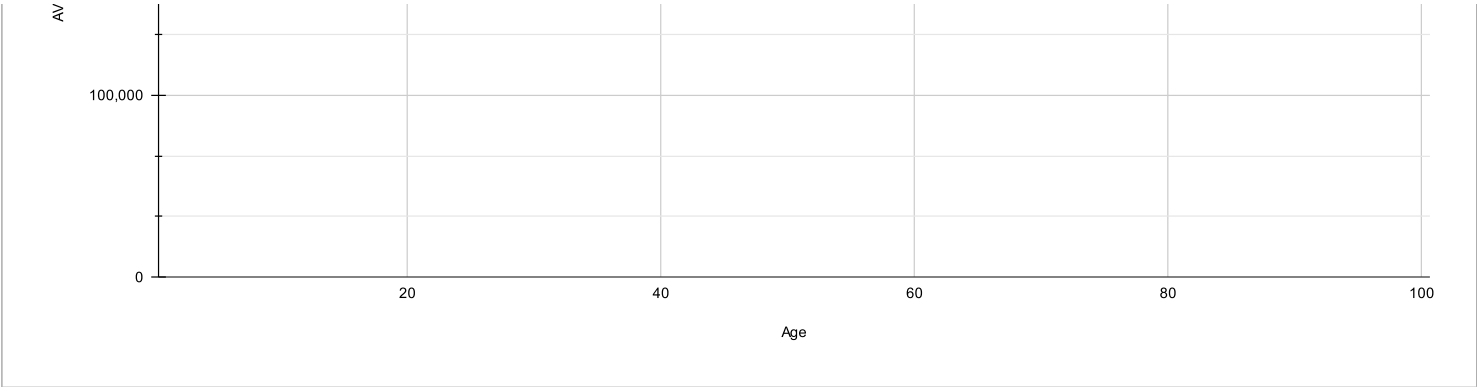
83	201,169
84	301,168
85	238,012
86	292,883
87	259,272
88	208,467
89	199,465
90	235,842
91	322,666
92	231,580
93	237,297
94	284,637
95	273,356
96	220,301
97	190,212
98	245,915
99	278,760
100	233,944

Disease by City: What are the most common diseases in each city?

City	Disease	COUNTA of Patient N
Multan Total		268
Faisalabad Total		258
Karachi Total		253
Islamabad Total		252
Lahore Total		249
Rawalpindi Total		245
Peshawar Total		242
Quetta Total		233

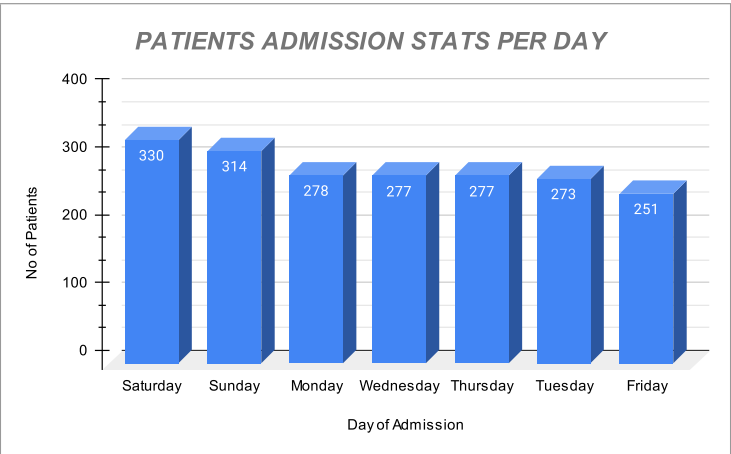**Hospital Performance:** Which hospital has the highest average treatment cost and which has the lowest?

Hospital Name	AVERAGE of Treatme
Mayo Hospital	266,666
Shaukat Khanum Memorial	265,875
Aga Khan University Hospit	264,980
Services Hospital	260,239

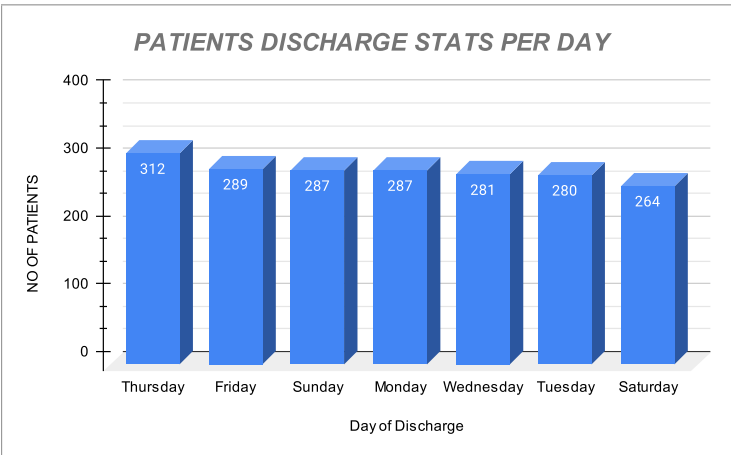| Lady Reading Hospital	259,920
Shaikh Zayed Hospital	258,269
Liaquat National Hospital	252,572
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Shifa International Hospital	239,466
Punjab Institute of Cardiolo	239,105
Pakistan Institute of Medica	236,607
Nishtar Hospital	236,582
Indus Hospital	228,396
Civil Hospital Karachi	226,452

AVERAGE TREATMENT COST

Admission and Discharge Dates: What are the peak times for admissions and discharges
in each hospital?

Day of Admission	COUNTA of Patient N
Saturday	330
Sunday	314
Monday	278
Wednesday	277
Thursday	277
Tuesday	273
Friday	251

Day of Discharge	COUNTA of Patie
Thursday	312
Friday	289
Sunday	287
Monday	287
Wednesday	281
Tuesday	280
Saturday	264

PATIENTS ADMISSION STATS PER DAY

No of Patients vs Day of Admission — Saturday 330, Sunday 314, Monday 278, Wednesday 277, Thursday 277, Tuesday 273, Friday 251

PATIENTS DISCHARGE STATS PER DAY

NO OF PATIENTS vs Day of Discharge — Thursday 312, Friday 289, Sunday 287, Monday 287, Wednesday 281, Tuesday 280, Saturday 264

Month of Admission	COUNTA of Patient N
January	324
February	296
March	271
April	262
May	204
July	172
June	151
August	137

Month of Dischar	COUNTA of Patie
December	293
November	280
September	256
October	256
August	208
July	181
May	149
June	146
April	100

September	88
October	61
November	28
December	6

March	74
February	45
January	12

NO OF PATIENTS ADMITED EACH MONTH

NO OF PATIENTS DISCHARGED EACH MONTH