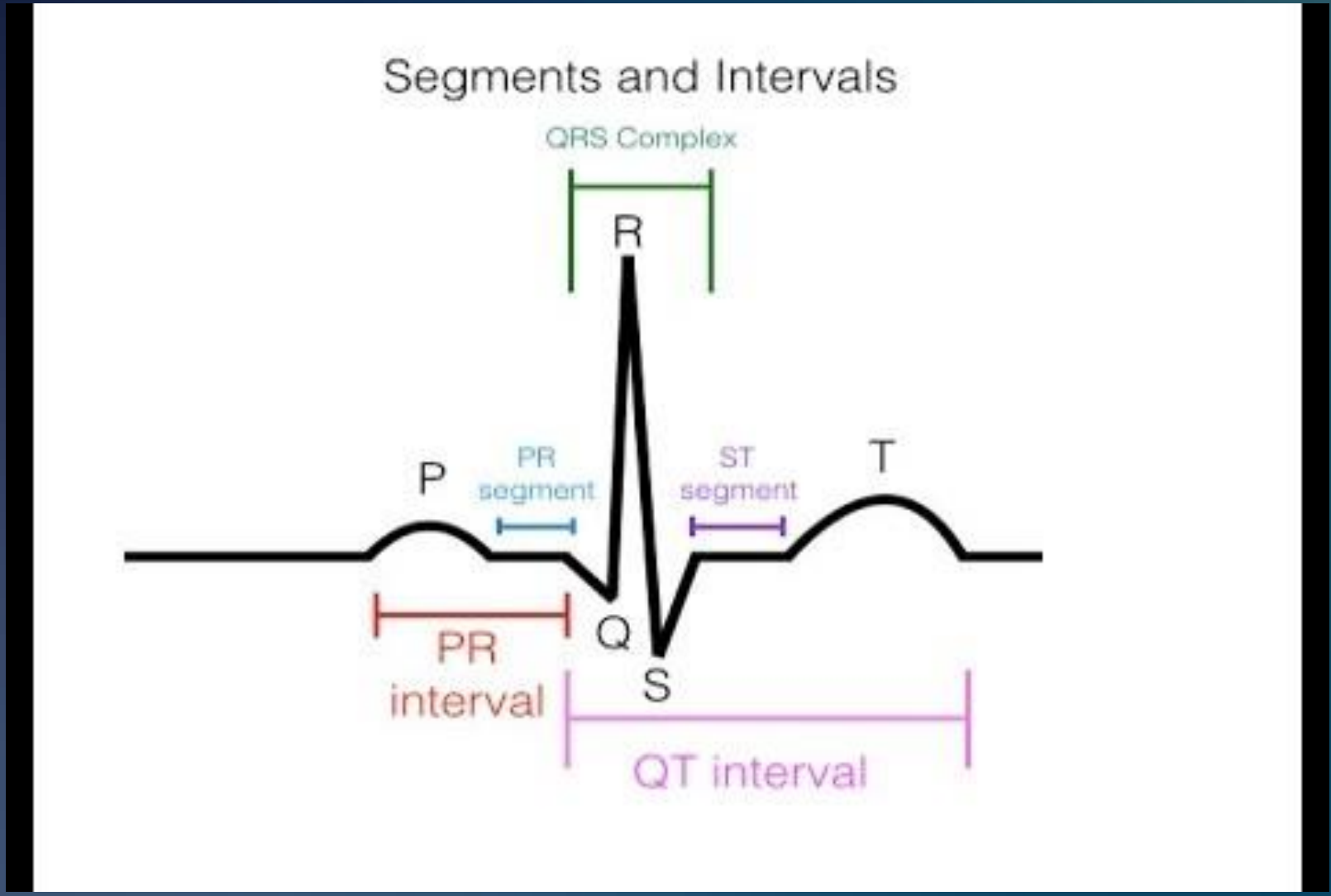
Research about ECG dataset

Chuankai_Luo

Brief introduce about ecg data



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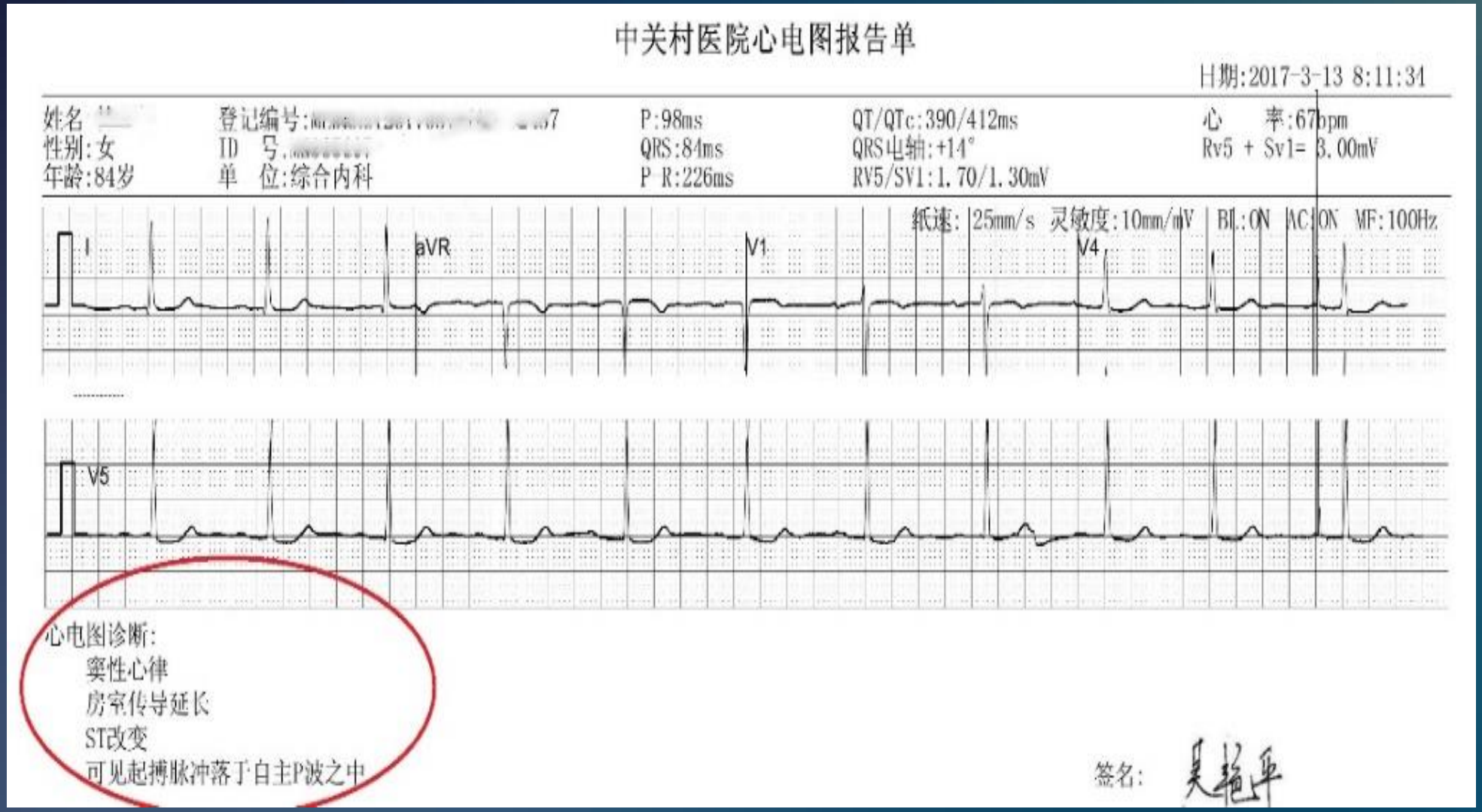


中关村医院心电图报告单

日期:2017-3-13 8:11:31

姓名
性别:女
年龄:84岁

登记编号:
ID 号:
单 位:综合内科

P:98ms
QRS:84ms
P-R:226ms

QT/QTc:390/412ms
QRS电轴:+14°
RV5/SV1:1.70/1.30mV

心 率:67bpm
Rv5 + Sv1= 3.00mV

纸速: 25mm/s 灵敏度:10mm/mV BL:ON AC:ON MF:100Hz

I aVR V1 V4

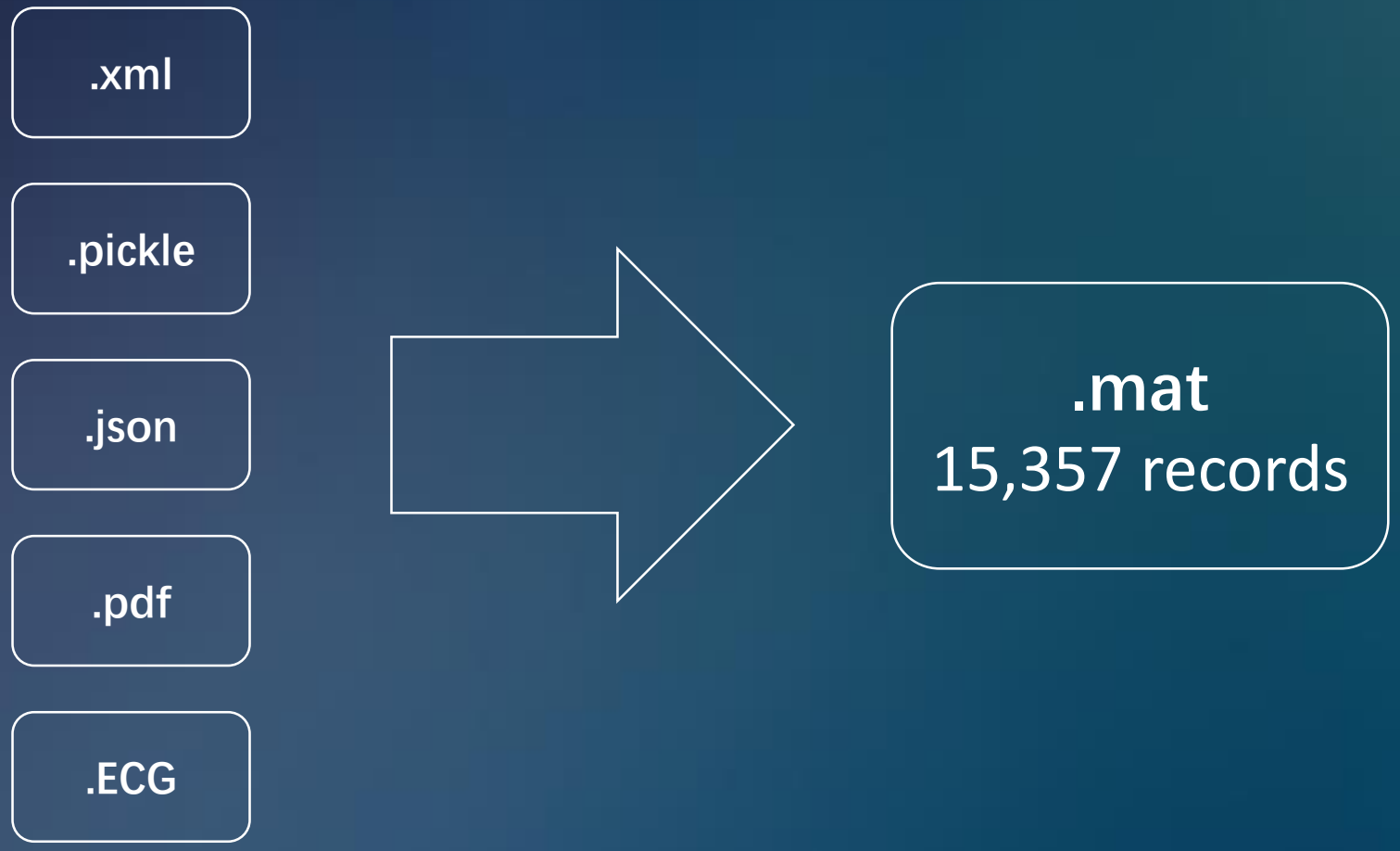
V5

心电图诊断:
窦性心律
房室传导延长
ST改变
可见起搏脉冲落于自主P波之中

签名:

Brief introduce about ecg data

China ECG AI Contest (CEAC) 2019



Question 1

label distribution in this dataset

Question 2

Correlation between various diseases and gender and age

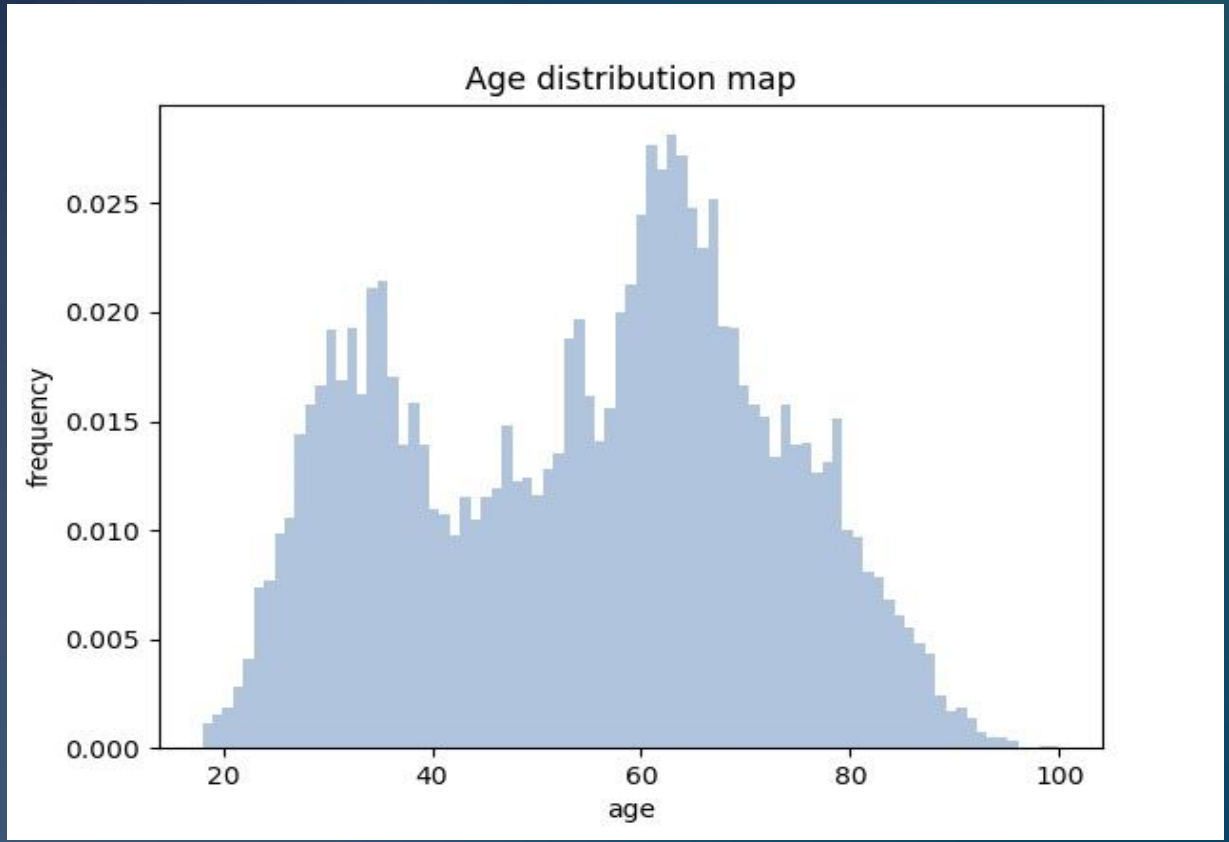
Question 3

Correlation between various diseases and diseases

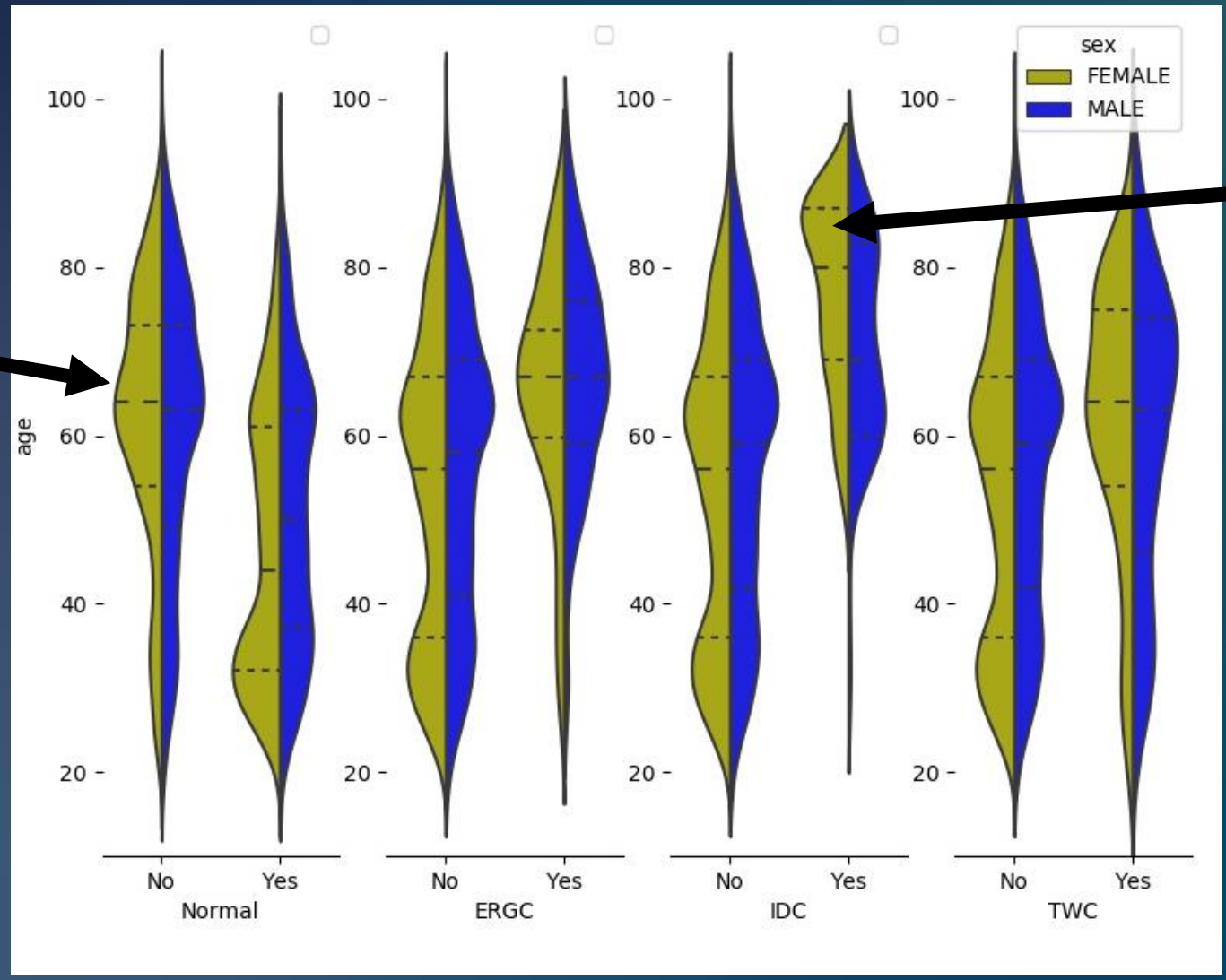
Question 1 label distribution in this dataset

Full name	abbreviation	Amount
Normal	Normal	9788
Early repolarization graphic change	ERGC	584
Indoor differential conduction	IDC	90
T wave change	TWC	5676
FirstdegreeA-Vblock	I-AVB	805
Atrial fibrillation	AFI	772
Premature atrial contraction	PAC	769
Complete right bundle branch block	CRBBB	963
Ventricular premature beat	VPB	844
Left anterior branch block	LAFB	343
Atrial flutter	AFL	163
Incomplete right bundle branch block	IRBBB	639

Question 1 label distribution in this dataset

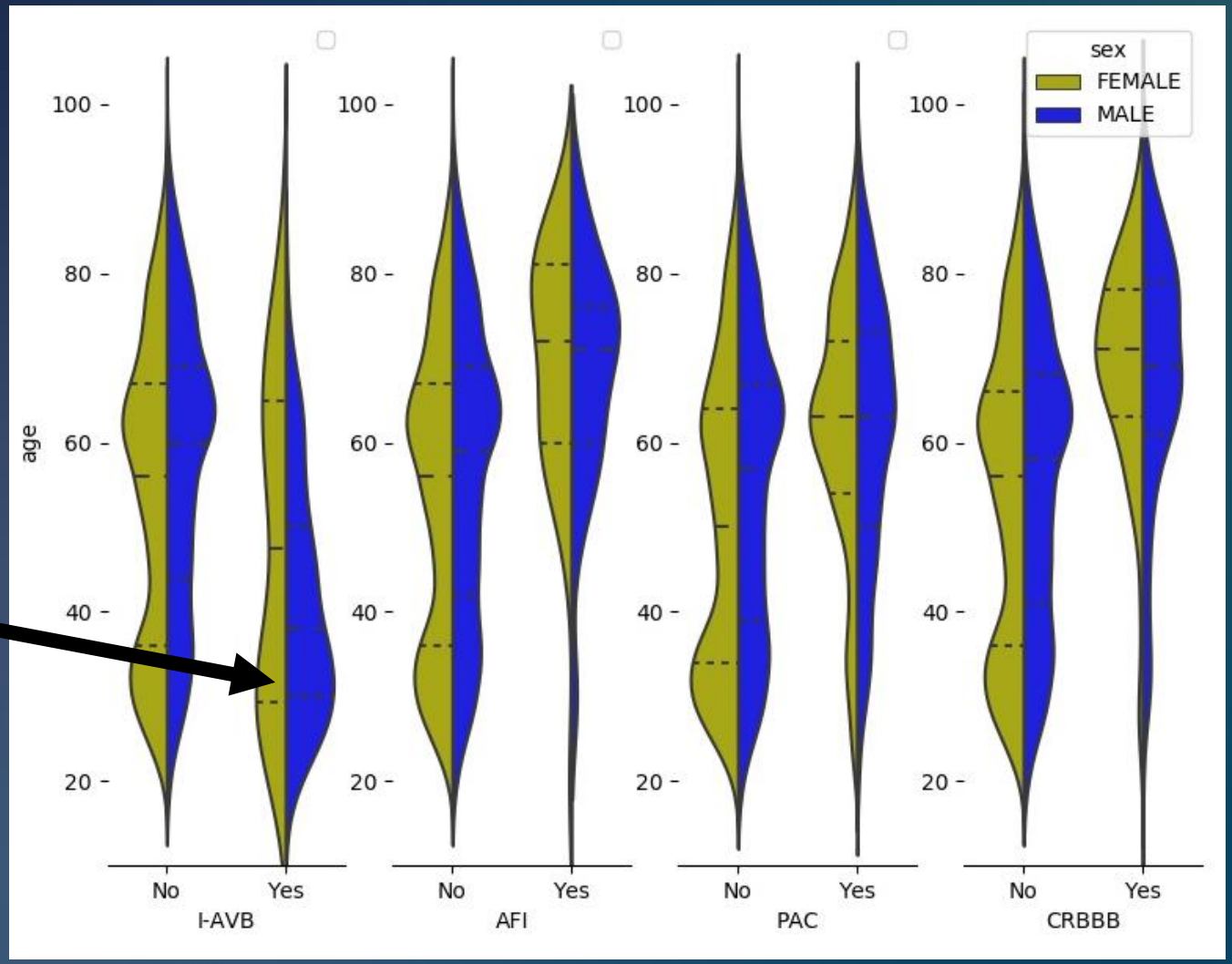


Question 2　Correlation between various diseases and gender and age



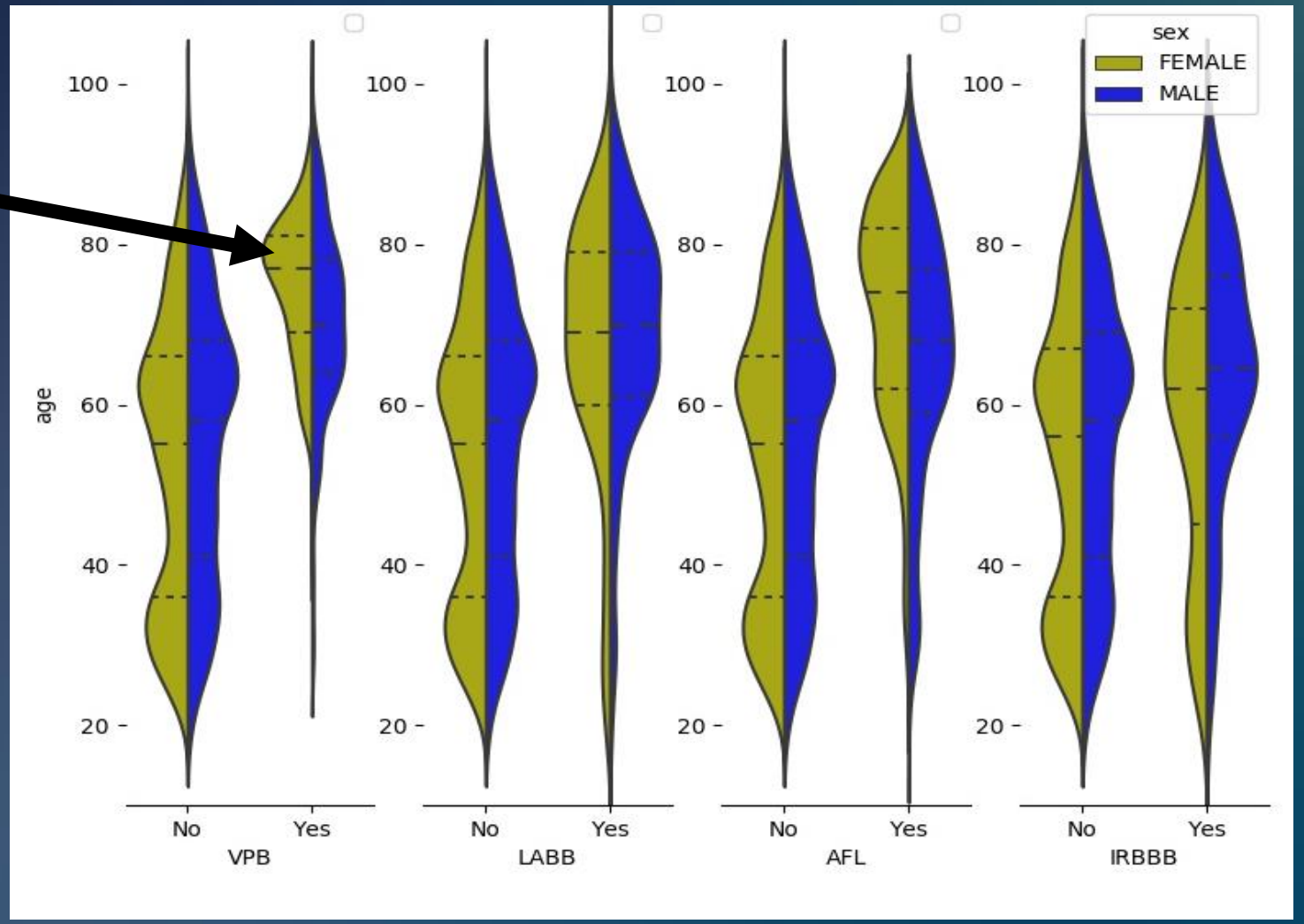
Question 2　Correlation between various diseases and gender and age

③



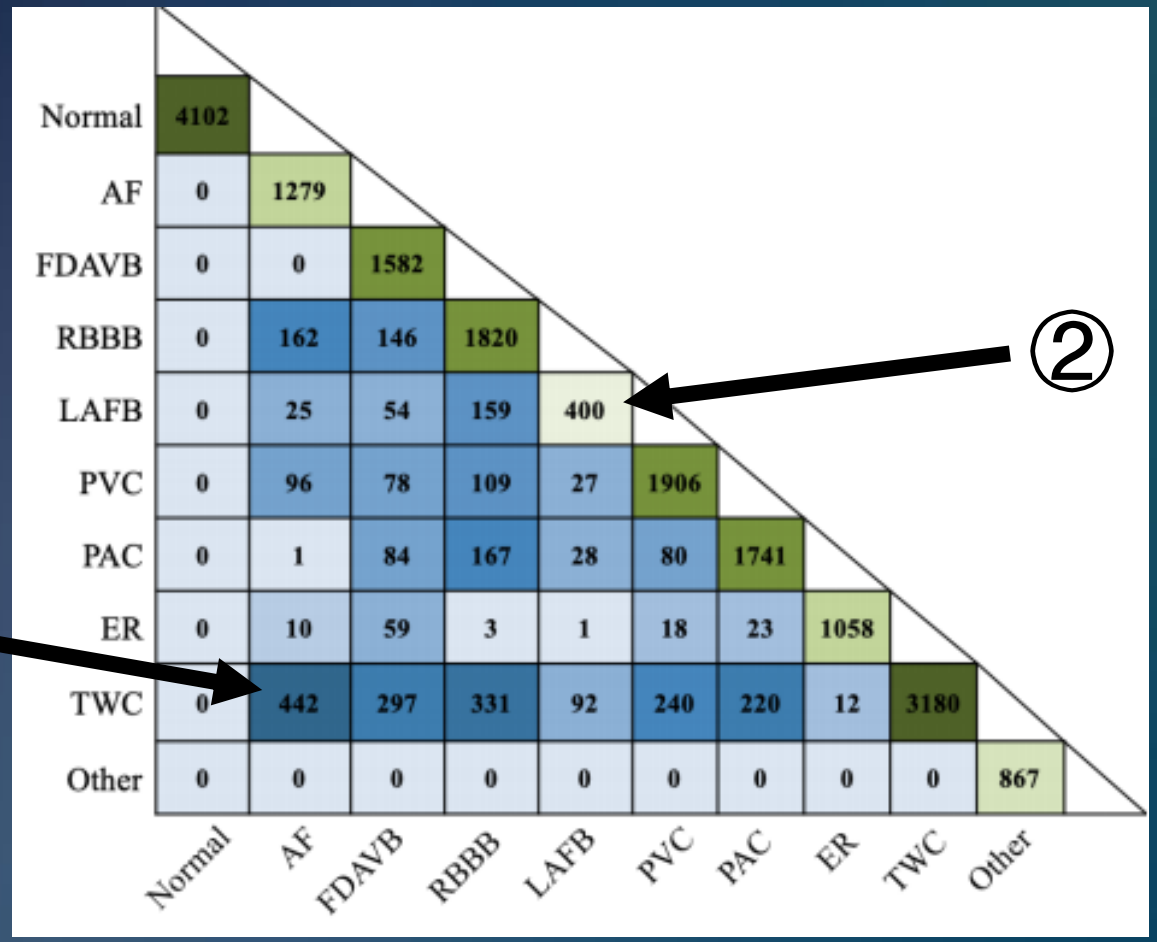
Question 2　Correlation between various diseases and gender and age

④



Question 3 Correlation between various diseases and diseases

	age	Normal	ERGC	IDC	TWC	I-AVB	AFI	PAC	CRBBB	VPB	LABB	AFL	IRBBB
age	1	-0.3671	0.08809	0.09346	0.06186	-0.12884	0.05298	0.23097	0.15809	0.20367	0.15112	0.16878	0.07699
Normal	-0.3671	1	-0.13357	-0.09165	-0.18374	-0.1754	-0.06798	-0.63919	-0.20714	-0.20267	-0.20226	-0.22751	-0.21231
ERGC	0.08809	-0.13357	1	0.00918	0.02586	-0.02342	0.01394	-0.02357	0.02724	0.00894	-0.00095	0.10824	0.0004
IDC	0.09346	-0.09165	0.00918	1	0.0148	-0.01607	0.01039	0.03932	-0.01898	-0.01857	-0.01853	0.03374	-0.01392
TWC	0.06186	-0.18374	0.02586	0.0148	1	-0.02884	0.00451	-0.04074	0.00249	0.04401	-0.00164	-0.04179	0.00205
I-AVB	-0.12884	-0.1754	-0.02342	-0.01607	-0.02884	1	-0.01192	-0.10744	-0.00608	-0.03245	-0.02619	-0.03989	-0.02836
AFI	0.05298	-0.06798	0.01394	0.01039	0.00451	-0.01192	1	-0.00183	-0.01408	0.16082	0.11064	-0.00499	-0.01071
PAC	0.23097	-0.63919	-0.02357	0.03932	-0.04074	-0.10744	-0.00183	1	-0.02463	0.06023	-0.03883	-0.05532	-0.04088
CRBBB	0.15809	-0.20714	0.02724	-0.01898	0.00249	-0.00608	-0.01408	-0.02463	1	-0.04197	-0.00613	0.02307	0.00796
VPB	0.20367	-0.20267	0.00894	-0.01857	0.04401	-0.03245	0.16082	0.06023	-0.04197	1	-0.04098	0.03522	0.00092
LABB	0.15112	-0.20226	-0.00095	-0.01853	-0.00164	-0.02619	0.11064	-0.03883	-0.00613	-0.04098	1	0.0233	-0.00409
AFL	0.16878	-0.22751	0.10824	0.03374	-0.04179	-0.03989	-0.00499	-0.05532	0.02307	0.03522	0.0233	1	-0.01457
IRBBB	0.07699	-0.21231	0.0004	-0.01392	0.00205	-0.02836	-0.01071	-0.04088	0.00796	0.00092	-0.00409	-0.01457	1

Spearman Correlation Coefficient

Question 3　Correlation between various diseases and diseases