



# How to improve the importance of metadata from the clinic to the lab

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British Heart  
Foundation



**DZHK**  
DEUTSCHES ZENTRUM FÜR  
HERZ-KREISLAUF-FORSCHUNG E.V.

## CLINICAL DATA

Donor	D1
Sex	Female
Age	50-55
Ethnic Origin	Caucasian
Primary diagnosis	CVA (stroke)
Cause of death (DBD or DCD)	DBD
NRP (time)	N/A
Height (cm)	155-160
Weight (Kg)	50-55
Girth (cm)	80-85
BMI	20-25
Hypertension	Y
Diabetes	N
Cancer	N
Pulmonary disease	N
Liver disease	N
Echocardiography (LVEF %)	>60%

## EXPERIMENTAL DATA

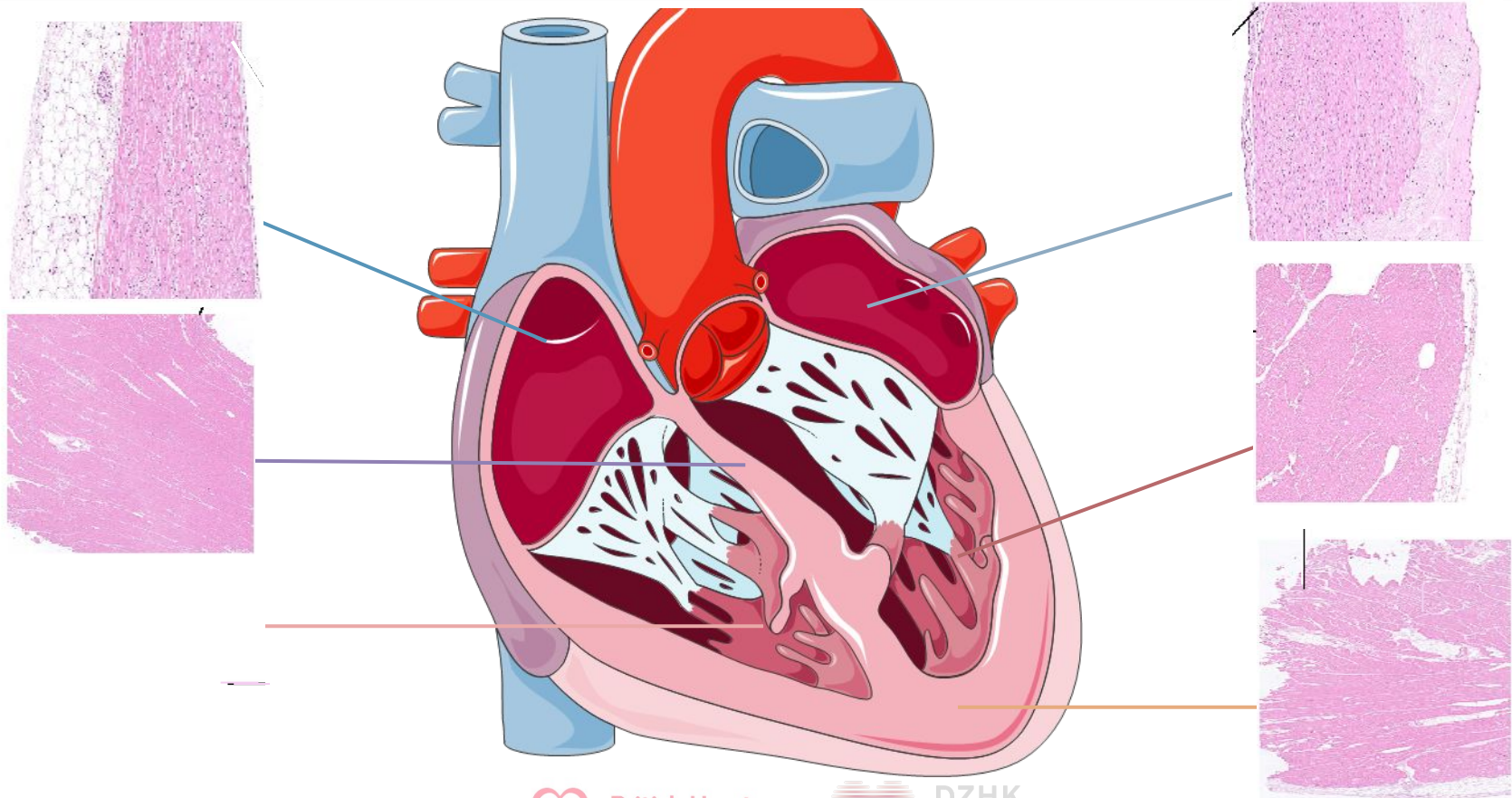
Donor	D1
Cells	4500
Genes	1570
Reads	44000
Source	Cells/Nuclei
Target Number of cells/nuclei	5000
Region	LV, RA, etc

## HISTOLOGY DATA

Staining	Target
H&E	Nucleus/cytoplasm
Elastic van Gieson (EVG)	Connective tissue (collagen and elastic fibres)/ fibrosis
Congo Red	Amyloid

Donor	Dx	Dy	Donor	Dx	Dy	Donor	Dx	Dy	
Sex	Female	Male	<b>Hypertension</b>	No	N	<b>Complete blood count</b>			
Age	65-70	50-55	<b>Cancer or malignancy</b>	No	N		• Neutrophils		9.0-7.0
Ethnic Origin	Caucasian	Caucasian	<b>Pulmonary disease</b>	No	N		• Lymphocytes [ white cell count 10^9/L]	1-5	0.8-2
Primary diagnosis	Intracranial haemorrhage	Ruptured cerebral aneurysm	<b>Liver disease</b>	No	N		• Basophils		0.1
Cause of death	DCD	DBD	<b>Diabetes</b>	No	N		• Eosinophils		0
NRP (time)	n/a	N/A	• Insulin, medicaton or diet controlled	n/a	N/A		• Monocytes		1-1
Donor type	DCD	-	• Family history of diabetes	Yes	N		• RBC count		4.5-4.0
Height (cm)	155-160	175-180	<b>Alcohol use (duration)</b>	Drinks rarely	Y (35yrs)		• MCV		90-95-95
Weight (Kg)	80-85	70-75	• Units of alcohol	<1u/day	6 beers every couple days		• MCH		N/A
Girth (cm)	100-105	N/A	<b>History of drug use?</b>	No	Y		• MCHC		335-325
BMI	30-35	20-25	• Drug details		occasionally	• RDW		13-15	
<b>Infections</b>			<b>Current or past smoker</b>	Non-smoker	Y	• Hb	100-105	145-120	
• CMV	+	-	• Smoking (duration)	n/a	40yrs	• Hct	0.30-0.35	0.4-0.4	
• EBV	+	+	• Number of Cigarettes per day	n/a	1ppd	• Platelet count	65-70	296-40	
• Toxo	-	-	• Date stopped smoking (if applicable)	n/a	N/A	<b>Inflammation parameters</b>			
• HIV	-	-	<b>Allergies?</b>		N	• ESR		N/A	
• HCV	-	-	• Allergy details	Diclofenac and citalopram	N/A	• CRP	50-55	N/A	
• HBV	-	-	<b>Heart</b>	no tests conducted					
<b>Infection at admission</b>	Yes		• ECG		sinus rhythm, unspcific ST-T wave abnormalities, prolonged QT interval				
• Diagnosis	aspiration infection	N/A	• Eco (EF etc)		LVEF >60%				
• Urine	No	No growth	• Troponin I ng/L	10-15	<0.1				
• Blood	No	No growth	• CK-MB?		N/A				
• Blood cultures result	No	No growth	• Myoglobin		N/A				
• CNS/CSF	No	No growth	• BNP or NT-proBNP		N/A				
• Chest	No	candida albicans isolated. No bacteria seen.	<b>Coagulation</b>						
• Treated for chest or aspiration	Yes	N	• aPTT (s)	25-30	30-40-35				
• Purulent sputum	No	1+yeast. 1+ mixed oropharangeal flora	• PT (prothrombin)	10-15	1.0-1.5				
• Donor sputum microscopy	No	4+ polymorphs. 1+ epithelial cells, 1+ RBCs. No bacteria seen.	• TT		N/A				
• Other infections	n/a	N	<b>Comprehensive Metabolic Panel</b>						
• Antibiotics (in the last two weeks prior to death )		N	• Glucose	10-15	7.5-2.5-10.5				
			• Calcium	1-5	1.0-1.65				
			• Albumin	20-25	35-30				
			• Total proteins	50-55	N/A				
			• Sodium (mmol/L)	150-155	140-155-145				
			• Potassium (mmol/L)	1-5	3.5-4				
			• CO2		30-18				
			• BUN (blood urea nitrogen) (mmol/L)	5-10	5-16-15				
			• Creatinine (umol/L)	115-120	105-210-155				
			• ALP	50-55	N/A				
			• ALT	10-15	N/A				
			• AST	n/a	N/A				
			• Bilirubin	10-15	20-35-25				

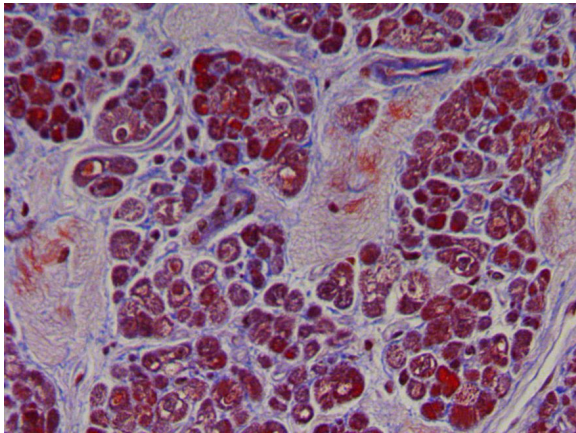
# Histological METADATA



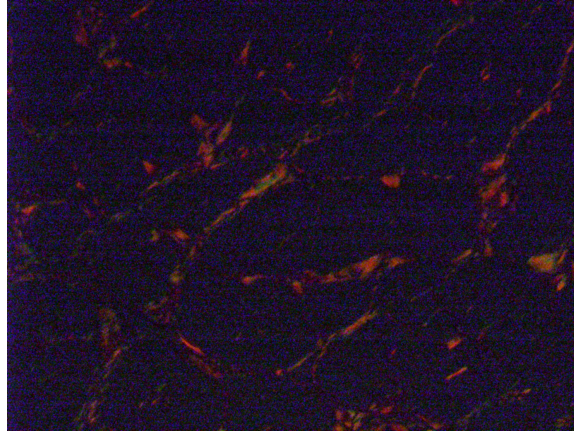


# Histological METADATA – RIGHT ATRIA: a complementary staining approach

Masson's trichrome, 20x



Picrosirius Red, Polar, 20x



Congo Red, 20x

