

# Work Diary

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**Name of the Tutor: Dr. Pitt Lim**

**Institution: St George's University Hospital, Department of Cardiology**

## *January*

*15 January Wednesday:* Arriving to London, arranging accommodation and British telephone number.

*16 January Thursday:* Appointment at the General Medical Council for full registration. Appointment at the Medical Staffing department of the St George's Hospital, preparing honorary contract and occupational health clearance request form. Meeting my tutor, Dr. Pitt Lim. We assess my previous clinical and scientific work and set goals for the scholarship period. Dr. Lim recommends literature to review (patent hemostasis, radial artery occlusion, etc.).

*17 January Friday:* Obtaining and reviewing the literature suggested by Dr. Lim.

*20 January Monday:* Getting familiar with the work system in the catheterisation laboratory, education about radiation safety. Observing coronary catheterisations. Practising assessment of radial artery patency by pulse oxymetry.

*21 January Tuesday:* Ward rounds. Occupational health examination, blood test. Meeting with Professor Juan Carlos Kaski, who is the academic head of the department. We discuss the details of the scientific work planned for the scholarship period. Examining patients at the outpatient clinic, dictating clinical letters:

Patient No.1: O.B., 42-year-old female with known ischaemic heart disease, hypertrophic cardiomyopathy, hypertension, asthma, prior inferoposterior myocardial infarction, percutaneous coronary intervention to left circumflex coronary artery due to spontaneous dissection, depressed ejection fraction and mild to moderate mitral valve regurgitation as complications. She is awaiting mitral valve surgery. She presented for evaluation of preventive left anterior descending intervention before cardiac surgery to prevent further dissections. Patient complained about exertional breathlessness. On examination her blood pressure was 105/75 mmHg and heart rate was 80 beats per minutes. After consulting with Dr. Lim, a decision has been made that no preventive percutaneous coronary intervention is needed. Before surgery, a diagnostic coronary catheterisation will be made as a day-case. The patient should be followed by the referring consultant and she should see the cardiac surgeon in February.

Patient No.2: A.V., 79-year-old male with chronic renal failure, pulmonary fibrosis, ischaemic heart disease, hypercholesterolaemia and aortic stenosis. He had 24-hour electrocardiography (ECG) and echocardiography in May 2013. He presented for regular follow-up and for results of his prior investigations. On the 24-hour ECG no abnormalities could be detected except supraventricular runs.

The echocardiography confirmed that the aortic stenosis was mild, with a mean gradient of only 10 mmHg, and an aortic area of 1.72 cm<sup>2</sup>. He complained about exertional breathlessness, and occasionally, chest pain, typically occurring during the night. His atenolol had been previously reduced from 100 mg to 50 mg, since then he did not experience any dizziness. Previously he had some swelling of the legs, which was possibly the side effect of amlodipine, thus it was discarded. He usually measures variably blood pressure values, sometimes they are high, sometimes within the normal range. He is a non-smoker, only drinks decaffeinated coffee. Based on Dr. Lim's suggestion this patient was further referred to the Blood Pressure Unit for ambulatory blood pressure monitoring.

*22 January Wednesday:* Multidisciplinary Team meeting (surgical and percutaneous treatment of aortic stenosis). Preparation of an observational clinical study, generating data sheets for patients.

*23 January Thursday:* Participating in the work of the invasive cardiology team in the catheterisation laboratory\*.

\*: In the followings "**Cath-lab day**" will be applied for this type of activity in the work diary. In general, 3-8 elective coronary catheterisations are performed on a Cath-lab day, as well as 0-3 primary cases beyond these, due to acute coronary syndrome. All of these consist of a first, diagnostic part called coronary angiography or left heart catheterisation (LHC). When coronary narrowings are found, and it is questionable whether they are significant or not in terms of flow limitation, a pressure wire study (PWS) is carried out. If there is a significant coronary lesion, percutaneous coronary intervention (PCI) is performed either with a balloon dilation (plain old balloon angioplasty – POBA), with direct stent implantation or usually, with the combination of these (pre- and post-dilations with balloons plus stent implantation to the critical lesion). Freshly appearing thrombotic lesions may be aspirated by a specific aspiration catheter. Most of the times drug eluting stents are used for coronary stenting, bare metal stents are rarely implanted. Chronic total occlusions (CTO) can only be intervened by long and difficult procedures. One option for those is rotablation with a special device, which is similar to an intravascular driller. Left ventriculograms (LV), aortograms (Ao) and graft angiographies (Graft) are carried out in order to assess left ventricular function, anatomy of the aortic root and valve, and patency of aorto-coronary bypass grafts, respectively. Intravascular ultrasound (IVUS) may become necessary for thorough assessment of the wall and lumen of the coronary vasculature and of coronary plaques. Acetylcholine study (ACh) is used to provoke coronary vasospasm, and is performed in patients with angina and negative coronary angiography to confirm that the symptoms are vasospasm-related. Intraaortic balloon pump (IABP) insertions are necessary for acute heart failure patients with low left ventricular ejection fraction after myocardial infarction.

**The above mentioned specific procedures usually include the following work phases:** obtaining patient consent, reviewing patient history, blood results and previous imaging, assessing radial artery patency by pulse oxymetry, patient preparation, premedication, isolation and local anaesthesia of the access site, radial or femoral arterial puncture, sheath insertion, administration of vasodilator and anticoagulant, connecting contrast loading equipment (manifold) and operating with it during the procedure, advancing J-wire and diagnostic catheters, finding and engaging coronary ostia,

recording angiograms from specific projections, changing catheters over the wire, introducing guiding catheters and guide wires, placing torquer, advancing balloons and stents, inflating balloons, deploying stents, advancing pigtail catheter to the aortic root or to the left ventricle, recording left ventriculogram and/or aortogram, removing catheters over the wire, removing sheath, placing compression bandage at, or manual compression of the puncture site, examining radial artery patency with pulse oxymetry, evaluation of recorded coronary angiograms, writing reports, collecting scientific data on radial patency for observational study.

Details of procedures are given in a collective table of patients in the **Appendix**.

When "**RR/LR/RF/RFV puncture**" and "**sheath insertion**" is indicated as the type of work performed, local anaesthesia of the access site, right or left radial artery, right femoral artery or right femoral vein puncture, sheath insertion and administration of vasodilator and anticoagulant have been carried out by the Fellow.

When "**catheterisation**" is indicated as the type of work performed, catheter advancing over the wire, engagement of coronary ostia, screening of the coronary artery and recording of the coronary angiogram, or any of the above have been carried out by the Fellow.

When "**assisting**" is indicated as the type of work performed, the following work phases have been carried out by the Fellow, as the assistant doctor of the LHC, PCI and/or PWS: connecting contrast loading equipment (manifold) and operating with it during the procedure, flushing catheters, needles, wires, assisting in catheter and wire advancing, placing torquer, assisting in screening and recording by contrast injection, assisting in catheter changes over the wire, assisting in placement and inflation of balloons and stents.

*24 January Friday:* Multidisciplinary Team meeting (Echocardiography). Meeting with Professor Sanjay Sharma, we discuss a case of a patient from outpatient clinic (Lady with hypertrophic cardiomyopathy and spontaneous coronary dissections).

*27 January Monday:* Cath-lab day, 4 cases (see Appendix). Occupational health clearance, signing honorary contract.

*28 January Tuesday:* Obtaining ID badges from the NHS trust and from the Medical School, requesting login to the electronic patient registry.

*29 January Wednesday:* Reading the "Guidelines for the management of common medical emergencies and for the use of antimicrobial drugs" of the St George's Hospital.

*30 January Thursday:* Cath-lab day, 5 cases (see Appendix).

*31 January Friday:* Appointment at the Job Centre Plus, obtaining National Insurance number. Reading the "Guidelines for the management of common medical emergencies and for the use of antimicrobial drugs" of the St George's Hospital.

## **February**

*3 February Monday:* Cath-lab day, 3 cases (see Appendix). Reading the "Handbook of coronary angiography and angioplasty".

*4 February Tuesday:* Ward rounds. Reading the "Handbook of coronary angiography and angioplasty". Examining patients at the Outpatient Clinic, dictating clinical letters:

Patient No.1: S.R., 51-year-old male, with a previous history of anterolateral myocardial infarction and stent implantation to the left anterior descending coronary artery, normal left ventricular function on echocardiography. He presented for a regular check-up. His main complaint was exertional breathlessness. On examination, his blood pressure and heart rate were normal. Based on the consultation with Dr. Lim, the patient was referred for an exercise stress test and repeated echocardiography.

Patient No.2: N.S., 68-year-old female, with a previous history of hypercholesterolaemia, Parkinson's disease and diverticulitis. She had a staged percutaneous coronary intervention in 2008 due to chest tightness and breathlessness. A stent was deployed in the left anterior descending coronary artery across the diagonal branch. A repeated coronary angiography was carried out in 2013 due to her persisting symptoms, which confirmed patent stents. Holter examination and respiratory function test were normal. She still complained about chest tightness and breathlessness upon walking. She also mentioned swelling of her legs, nycturia of 4 to 5 times per night and joint problems affecting her right knee. Previously some degree of myopathy was also reported, possibly due to the side effect of statin treatment. After consulting with Dr. Lim, a repeated echocardiography was arranged for her. It was suggested to reduce her statin from 20 to 10 mg on a trial basis.

*5 February Wednesday:* "Shadowing" a Cardiology Specialist Registrar at the ward in the morning. Cath-lab afternoon. Obtaining serology results and vaccination at the Occupational health department. Reading the "Handbook of coronary angiography and angioplasty".

*6 February Thursday:* Cath-lab day, 5 cases (see Appendix). Reading the "Handbook of coronary angiography and angioplasty".

*7 February Friday:* Cath-lab day, 2 cases (see Appendix). Reading the "Handbook of coronary angiography and angioplasty".

*10 February Monday:* Cath-lab day, 7 cases (see Appendix).

*11 February Tuesday:* Ward rounds. Preparing Myocardial Infarction Registry for Internal Audit. Observing patient assessment at the outpatient clinic.

*12 February Wednesday:* Clinical data evaluation of patients after radial puncture.

*13 February Thursday:* Cath-lab day, 2 cases (see Appendix). Clinical data evaluation of patients after radial puncture.

*14 February Friday:* Clinical data evaluation of patients after radial puncture. Meeting and discussion with a University Ethical Committee employee about ethical approval of a prospective observational clinical study.

*17 February Monday:* Cath-lab day, 5 cases (see Appendix).

*18 February Tuesday:* Ward rounds. Shadowing SHO colleague at the ward. Observing patient assessment at the outpatient clinic.

*19 February Wednesday:* Clinical data evaluation, editing manuscript.

*20 February Thursday:* Cath-lab day, 7 cases (see Appendix).

*21 February Friday:* Administrative work for ethical approval, writing research project plan.

*24 February Monday:* Cath-lab day, 7 cases (see Appendix).

*25 February Tuesday:* Updating patient database of observational study on radial patency. Observing patient assessment at the outpatient clinic.

*26 February Wednesday:* Updating patient database of observational study on radial patency. Literature review for a case report (Patient with exercise-induced left bundle branch block and chest pain managed by cardiac resynchronisation therapy).

*27 February Thursday:* Cath-lab day, 4 cases (see Appendix).

*28 February Friday:* Writing manuscript of case report. Updating patient database of observational study on radial patency.

### **March**

*3 March Monday:* Cath-lab day, 4 cases (see Appendix).

*4 March Tuesday:* Ward rounds. Writing manuscript of case report. Updating patient database of observational study on radial patency.

*5 March Wednesday:* Opening bank account. Writing manuscript of case report. Updating patient database of observational study on radial patency.

*6 March Thursday:* Cath-lab day, 6 cases (see Appendix).

*7 March Friday:* Writing manuscript of case report. Updating patient database of observational study on radial patency.

*10 March Monday:* Cath-lab day, 6 cases (see Appendix).

*11 March Tuesday:* Ward rounds. Updating patient database of observational study on radial patency. Examining patients at the outpatient clinic, dictating clinical letters:

Patient No.1: M.D., 73 year-old male, with a known previous history of hypertension, mild left ventricular hypertrophy, coronary angiography in 2001 confirming mild to moderate disease of the left anterior descending coronary artery, Thallium myocardial scan in 2006 with no inducible ischaemia reported and operation due to prostate problem. He presented for a regular check-up. Last year he had a mild heart attack which was taken care of conservatively. Since he received nicorandil, he feels a little better, develops chest discomfort rarely. However he complained about exertional

breathlessness, which resolves upon rest. This did not trouble him much. Last week he had urinary tract infection, which was treated with oral antibiotics. On examination he had normal heart sounds, no rales above the lungs and a blood pressure of 140-150/86-90 mmHg with a heart rate of 80 beats per minute. Based on the consultation with Dr. Lim the patient was suggested to undergo dobutamine stress echocardiography to assess if there is an ischaemic background of his symptoms.

Patient No.2: S.D., 81-year old male, with a previous history of left inguinal herniation, prior stenting of the right coronary artery, repeated percutaneous coronary intervention in November 2013 due to in-stent restenosis, drug-eluting balloon treatment. He presented for a regular follow-up. He told that after the procedure in November he felt somewhat more breathless for 5-6 weeks, then this reduced to a degree similar to that before the procedure. However, his complaints regarding chest pain improved significantly. He take 1 hour walks every day, and usually has to stop due to tiredness. On a more strenuous day he also feels some chest heaviness. He takes prednisolone for polymyalgia since 2011, which is roughly the time when his simvastatin was changed to atorvastatin. On examination he had normal heart sounds, no rales above the lungs and normal blood pressure values. As atorvastatin may cause him muscle pain, we suggested this patient to stop taking it for 2 weeks on a trial basis. If his symptoms improve, he should not take atorvastatin in the future. If they remain the same, he can continue the statin therapy. A follow-up has been arranged in a 6-month period of time.

*12 March Wednesday:* Updating patient database of observational study on radial patency. Updating Infarction Registry.

*13 March Thursday:* Cath-lab day, 3 cases (see Appendix).

*14 March Friday:* Updating patient database of observational study on radial patency. Updating Infarction Registry.

*15 March Saturday:* Cath-lab day, 4 cases (see Appendix).

*17 March Monday:* Cath-lab day, 3 cases (see Appendix).

*18 March Tuesday:* Ward rounds. Updating patient database of observational study on radial patency. Updating Infarction Registry.

*19 March Wednesday:* Updating patient database of observational study on radial patency. Updating Infarction Registry.

*20 March Thursday:* Cath-lab day, 7 cases (see Appendix).

*21 March Friday:* Ward rounds. Updating patient database of observational study on radial patency. Updating Infarction Registry.

*22 March Saturday:* Cath-lab day, 5 cases (see Appendix).

*24 March Monday:* Cath-lab day, 6 cases (see Appendix).

*25 March Tuesday:* Ward rounds. Updating patient database of observational study on radial patency. Updating Infarction Registry. Writing manuscript of case report.

*26 March Wednesday:* Updating patient database of observational study on radial patency. Updating Infarction Registry. Writing manuscript of case report.

*27 March Thursday:* Cath-lab day, 5 cases (see Appendix).

*28 March Friday:* Ward rounds. Updating patient database of observational study on radial patency. Updating Infarction Registry.

*31 March Monday:* Cath-lab day, 6 cases (see Appendix).

## **April**

*1 April Tuesday:* Ward rounds. Updating patient database of observational study on radial patency. Examining patients at the outpatient clinic, dictating clinical letters:

Patient No.1: M.P., 66 year-old male, previous medical history of hyperlipidaemia, ischaemic heart disease, percutaneous coronary intervention to right coronary artery in 2010, negative stress echocardiography in 2013. In the last few months he developed atypical back and neck pain radiating towards both shoulders, relieves with sublingual glyceryl trinitrate. Usually experienced this while driving in the morning. He occasionally developed shortness of breath at moderate exertion and also has complaints about reflux related symptoms, abdominal pain as well as pain in the legs. We recommended an exercise tolerance test, during which he performed over 12 minutes, reached 81% of target heart rate, developed non-significant, upsloping ST segment depression without any chest pain. In view of these results it is unlikely that his symptoms were ischaemia-related, thus the patient was reassured. We also recommended diltiazem to be added to his current medical therapy, if he develops more severe or more frequent symptoms.

Patient No.1: T.T., 41 year-old male, previous medical history of hypertension, panic attacks, overactive bladder. He recently has been investigated due to palpitation and irregular heart beat. His echocardiogram showed mild left ventricular hypertrophy, mild left ventricular diastolic dysfunction, mild left atrial dilatation and very mild mitral regurgitation. His 24-hour electrocardiogram was normal, sinus rhythm was present throughout the study period with a few atrial and ventricular ectopic beats. His exercise tolerance test was normal, he developed no chest pain, only some ventricular extrasystoles were detected, however, he was hypertensive throughout the examination. He usually had a systolic blood pressure over 150 mmHg. On examination he had a systolic blood pressure value between 138-148 mmHg. He said that he was taking fesoterodine, an anticholinergic agent for overactive bladder syndrome. This medication may aggravate problems related to elevated blood pressure as a side effect. He was referred to the Hypertension Clinic to investigate possible secondary reasons in the background of his hypertension, and to optimise medical therapy taking into account his current medication for overactive bladder syndrome.

*2 April Wednesday:* Updating patient database of observational study on radial patency. Updating Infarction Registry.

*3 April Thursday:* Cath-lab day, 7 cases (see Appendix).

*4 April Friday:* Ward rounds. Transoesophageal echocardiography course.

*7 April Monday:* Cath-lab day, 6 cases (see Appendix).

*8 April Tuesday:* Ward rounds. Updating patient database of observational study on radial patency. Manuscript revision.

*9 April Wednesday:* Updating patient database of observational study on radial patency. Manuscript revision.

*10 April Thursday:* Cath-lab day, 5 cases (see Appendix).

*11 April Friday:* Ward rounds. Updating patient database of observational study on radial patency. Manuscript revision.

*14 April Monday:* Cath-lab day, 5 cases (see Appendix).

*15-16-17-18 April:* Annual leave.

*22 April Tuesday:* Updating patient database of observational study on radial patency. Reviewing manuscript.

*23 April Wednesday:* Updating patient database of observational study on radial patency. Reviewing manuscript.

*24 April Thursday:* Cath-lab day, 5 cases (see Appendix).

*25 April Friday:* Ward rounds. Updating patient database of observational study on radial patency. Reviewing manuscript.

*28 April Monday:* Cath-lab day, 5 cases (see Appendix).

*29 April Tuesday:* Ward rounds. Updating patient database of observational study on radial patency. Reviewing manuscript.

*30 April Wednesday:* Updating patient database of observational study on radial patency. Reviewing manuscript.

## **May**

*1 May Thursday:* Cath-lab day, 5 cases (see Appendix).

*2 May Friday:* Reviewing literature on radial patency.

*6-7 May:* Annual leave.

*8 May Thursday:* Cath-lab day, 6 cases (see Appendix).

*9 May Friday:* Ward rounds. Updating patient database of observational study on radial patency. Reviewing manuscript.

*10 May Saturday:* Cath-lab day, 6 cases (see Appendix).

*12 May Monday:* Cath-lab day, 8 cases (see Appendix).



*13 May Tuesday:* Ward rounds. Updating patient database of observational study on radial patency. Observing patient assessment at the outpatient clinic.

*14 May Wednesday:* Updating patient database of observational study on radial patency. Preparing for board examination.

*15 May Thursday:* Cath-lab day, 5 cases (see Appendix).

*16 May Friday:* Updating patient database of observational study on radial patency. Preparing for board examination.

*17 May Saturday:* Cath-lab day, 9 cases (see Appendix).

*19 May Monday:* Cath-lab day, 6 cases (see Appendix).

*20 May Tuesday:* Updating patient database of observational study on radial patency. Preparing for board examination.

*21 May Wednesday:* Updating patient database of observational study on radial patency. Preparing for board examination.

*22 May Thursday:* Cath-lab day, 6 cases (see Appendix).

*23 May Friday:* Updating patient database of observational study on radial patency. Preparing for board examination.

*27 May Tuesday:* Updating patient database of observational study on radial patency. Preparing for board examination. Observing patient assessment at the outpatient clinic.

*28 May Wednesday:* Updating patient database of observational study on radial patency. Finalising scholarship documents.

*29 May Thursday:* Cath-lab day, 7 cases (see Appendix).

*30 May Friday:* Updating patient database of observational study on radial patency. Finalising scholarship documents.

## Appendix

### Summary of coronary procedures reported

No. of Patient	Patient's initials	Date of procedure	Age	Sex	Procedure type	Access site	Vessel intervened	Type of work performed by Fellow
1	F.G.	2014.01.27	62	M	LHC, PWS	RR	CX	Assisting
2	J.E.	2014.01.27	82	F	LHC	LR	-	Assisting
3	D.W.	2014.01.27	81	F	LHC	LR	-	Assisting
4	V.L.	2014.01.27	53	M	LHC, PCI	RR, RF	CX	Assisting
5	F.K.	2014.01.30	43	M	LHC, PWS, PCI	LR	LAD	Assisting
6	P.W.	2014.01.30	79	M	LHC	RR	-	Assisting
7	H.S.	2014.01.30	75	M	LHC, PWS	LR	-	Assisting
8	M.C.	2014.01.30	78	M	LHC, PCI	LR	RCA	Assisting
9	D.B.	2014.01.30	76	F	LHC, PCI (CTO)	RR	RCA	Assisting
10	M.W.	2014.02.03	71	M	LHC	RR	-	Assisting
11	K.B.	2014.02.03	67	F	LHC, PWS	RR	-	Assisting
12	G.G.	2014.02.03	77	M	LHC, PCI	RR	IM	Assisting
13	S.J.	2014.02.05	49	M	LHC	RF	-	Assisting
14	J.M.	2014.02.06	55	M	LHC, PWS	LR	-	Assisting
15	I.S.	2014.02.06	70	F	LHC, LV	RF	-	Assisting
16	A.V.	2014.02.06	73	F	LHC	LR	-	Assisting
17	S.H.	2014.02.06	69	M	LHC	RR	-	Assisting
18	G.R.	2014.02.06	76	M	LHC, PCI	RR	LAD	Assisting
19	J.D.	2014.02.07	88	M	Ao	RF	-	Assisting
20	S.R.	2014.02.07	70	F	LHC, PCI	RF	LAD	Assisting
21	P.C.	2014.02.10	72	F	LHC, PCI	RR	RCA	Assisting
22	N.C.	2014.02.10	66	M	LHC	LR	-	Assisting
23	C.P.	2014.02.10	49	M	LHC, POBA	RR	LM/Int/CX	Assisting
24	K.T.	2014.02.10	61	M	LHC	RF	-	Assisting
25	M.A.	2014.02.10	63	M	LHC	RR	-	Assisting

No. of Patient	Patient's initials	Date of procedure	Age	Sex	Procedure type	Access site	Vessel intervened	Type of work performed by Fellow
26	K.C.	2014.02.10	62	M	LHC, PWS	RR	-	Assisting
27	M.S.	2014.02.10	57	M	LHC, PCI (CTO)	RR	-(unsuccessful)	Assisting
28	B.P.	2014.02.13	68	F	LHC	LR	-	Assisting
29	D.R.	2014.02.13	79	M	LHC	RR	-	Assisting
30	G.C.	2014.02.17	49	M	LHC, LV, PCI	RR	RCA	Assisting
31	F.N	2014.02.17	46	F	LHC	RR	-	RR puncture, sheath insertion, assisting
32	A.E.	2014.02.17	76	F	LHC	RR	-	RR puncture, sheath insertion, assisting
33	H.M.	2014.02.17	66	F	LHC, PWS	LR	-	Assisting
34	W.D.	2014.02.17	53	F	LHC, LV	RR	-	RR puncture, sheath insertion, assisting
35	M.K.	2014.02.20	63	M	LHC	RR	-	RR puncture, sheath insertion, assisting
36	M.H.	2014.02.20	70	F	LHC, ACh	RR	-	RR puncture, sheath insertion, assisting
37	P.W.	2014.02.20	73	F	LHC, Graft	LR	-	Assisting
38	A.G.	2014.02.20	66	M	LHC	RR	-	Assisting
39	M.H.	2014.02.20	62	F	LHC, PCI	LR	RCA	Assisting
40	J.F.	2014.02.20	73	F	LHC	RF	-	Assisting
41	A.T.	2014.02.20	63	F	LHC, PWS	RF	-	Assisting
42	F.E.	2014.02.24	68	M	LHC	RR	-	RR puncture, sheath insertion, assisting
43	D.C.	2014.02.24	41	F	LHC, PCI	RR	RCA	RR puncture, sheath insertion, assisting
44	G.D.	2014.02.24	79	F	LHC	RR	-	RCA catheterisation, assisting
45	V.P.	2014.02.24	83	F	LHC	RR	-	RCA and LCA catheterisation
46	S.B.	2014.02.24	45	M	LHC	RR	-	RCA catheterisation, assisting
47	D.M.	2014.02.24	56	M	LHC	RR	-	Assisting
48	D.H.	2014.02.24	53	M	LHC	RR	-	Assisting
49	T.M.	2014.02.27	71	F	LHC, PWS	RR	-	Assisting
50	D.R.	2014.02.27	68	F	LHC	RR	-	RR puncture, sheath insertion, RCA and LCA catheterisation
51	B.S.	2014.02.27	73	M	LHC, POBA	RR	LAD	RR puncture, sheath insertion, RCA catheterisation, assisting
52	J.F.	2014.02.27	80	F	LHC, PCI (CTO - Rotablation)	RR	CX	Assisting
53	S.M.	2014.03.03	70	M	LHC, PWS	LR	-	RCA catheterisation, assisting

No. of Patient	Patient's initials	Date of procedure	Age	Sex	Procedure type	Access site	Vessel intervened	Type of work performed by Fellow
54	M.F.	2014.03.03	78	F	LHC	LR	-	RCA catheterisation, assisting
55	B.S.	2014.03.03	73	M	LHC, PCI (CTO - Rotablation)	LR	LAD	Assisting
56	C.D.	2014.03.03	69	F	LHC, LV	RR	-	RR puncture, sheath insertion, RCA catheterisation, assisting
57	C.C.	2014.03.06	56	F	LHC	LR	-	RCA catheterisation, assisting
58	D.B.	2014.03.06	74	M	LHC, PCI	RR	RCA	RR puncture, sheath insertion, RCA catheterisation, assisting
59	R.G.	2014.03.06	78	M	LHC, PWS	RR	-	RR puncture, sheath insertion, RCA catheterisation, assisting
60	E.K.	2014.03.06	70	F	LHC	LR	-	RCA catheterisation, assisting
61	M.M.	2014.03.06	80	M	LHC, LV	LR	-	Assisting
62	M.G.	2014.03.06	51	M	LHC, PCI	RR	CX	RR puncture, sheath insertion, assisting
63	J.H.	2014.03.10	81	M	LHC, PCI	LR	RCA	LR puncture, sheath insertion, assisting
64	K.B.	2014.03.10	75	F	LHC	LR	-	LR puncture, sheath insertion, RCA catheterisation, assisting
65	R.S.	2014.03.10	62	M	LHC	RR	-	RR puncture, sheath insertion, assisting
66	J.I.	2014.03.10	64	M	LHC, PWS	RR	-	RR puncture, RCA catheterisation, assisting
67	D.F.	2014.03.10	64	M	LHC, PCI	LR	RCA	Assisting
68	P.W.	2014.03.10	79	M	LHC, PCI	LR	CX	LR puncture, sheath insertion, assisting
69	M.R.	2014.03.13	68	M	LHC	RR	-	RR puncture, sheath insertion, RCA catheterisation, assisting
70	V.L.	2014.03.13	53	M	LHC, PWS	LF	-	LCA and RCA catheterisation, assisting
71	E.M.	2014.03.13	65	M	LHC, PCI	RR	LAD	RR puncture, sheath insertion, assisting
72	S.M.	2014.03.15	66	M	LHC	RR	-	RR puncture, sheath insertion, assisting
73	M.B.	2014.03.15	62	M	LHC, LV, Graft	LR	-	LR puncture, sheath insertion, RCA catheterisation, assisting
74	C.D.	2014.03.15	71	M	LHC	RR	-	RR puncture, sheath insertion, RCA and LCA catheterisation
75	J.H.	2014.03.15	85	F	LHC	RR	-	RR puncture, sheath insertion, assisting
76	M.L.	2014.03.17	68	F	LHC	RR	-	RR puncture, sheath insertion, RCA and LCA catheterisation
77	D.W.	2014.03.17	56	M	LHC, PWS	RR	-	RR puncture, sheath insertion, assisting
78	P.S.	2014.03.17	78	F	LHC	RR	-	RR puncture, sheath insertion, assisting
79	M.W.	2014.03.17	80	F	LHC	LR	-	LR puncture, sheath insertion, RCA and LCA catheterisation
80	E.E.	2014.03.17	75	F	LHC	RR	-	RR puncture, sheath insertion, assisting
81	E.A.	2014.03.17	74	F	LHC	LR	-	LR puncture, sheath insertion, RCA catheterisation, assisting

No. of Patient	Patient's initials	Date of procedure	Age	Sex	Procedure type	Access site	Vessel intervened	Type of work performed by Fellow
82	S.V.	2014.03.20	68	M	LHC	RR	-	RR puncture, sheath insertion, RCA and LCA catheterisation
83	C.R.	2014.03.20	82	F	LHC	LR	-	LR puncture, sheath insertion, RCA catheterisation, assisting
84	D.F.	2014.03.20	54	F	LHC, LV	RR	-	Assisting
85	R.S.	2014.03.20	43	M	LHC, PWS	RR	-	RR puncture, sheath insertion, assisting
86	M.A.	2014.03.20	55	M	LHC, ACh	RR	-	RR puncture, sheath insertion, RCA catheterisation, assisting
87	D.M.	2014.03.20	57	M	LHC, PCI	LR	RCA	LR puncture, sheath insertion, RCA catheterisation, assisting
88	P.H.	2014.03.20	73	M	LHC	RR	-	Assisting
89	E.B.	2014.03.22	75	M	LHC	RR	-	Assisting
90	I.M.	2014.03.22	67	M	LHC	RR	-	RR puncture, sheath insertion, RCA catheterisation, assisting
91	A.R.	2014.03.22	61	F	LHC	RF	-	RCA and LCA catheterisation
92	S.T.	2014.03.22	77	F	LHC, LV	RF	-	RCA and LCA catheterisation
93	K.G.	2014.03.22	52	M	LHC	RR	-	RCA and LCA catheterisation
94	H.G.	2014.03.24	64	M	LHC, PCI	RR	CX	RCA catheterisation, assisting
95	D.W.	2014.03.24	83	M	LHC	LR	-	LR puncture, sheath insertion, RCA catheterisation, assisting
96	B.M.	2014.03.24	77	M	LHC, PCI	RR	LAD	Assisting
97	M.A.	2014.03.24	61	F	LHC, PWS	LR	-	LR puncture, sheath insertion, assisting
98	E.A.	2014.03.24	74	F	LHC, PCI	RR	LAD, RCA	Assisting
99	R.B.	2014.03.24	79	M	LHC, Graft, PCI	LR	CX	LR puncture, sheath insertion, RCA catheterisation, assisting
100	M.T.	2014.03.27	53	M	LHC	RR	-	RCA catheterisation, assisting
101	J.B.	2014.03.27	72	M	LHC, PWS	RR	-	Assisting
102	A.B.	2014.03.27	68	M	LHC	RR	-	RR puncture, sheath insertion, assisting
103	R.H.	2014.03.27	62	M	LHC	LR	-	LR puncture, sheath insertion, RCA catheterisation, assisting
104	D.P.	2014.03.27	82	M	LHC, LV	RR	-	RR puncture, sheath insertion, RCA catheterisation, assisting
105	J.D.	2014.03.31	71	M	LHC	RR	-	RR puncture, sheath insertion, RCA and LCA catheterisation
106	B.R.	2014.03.31	72	F	LHC	LR	-	LR puncture, sheath insertion, RCA catheterisation, assisting
107	J.H.	2014.03.31	44	M	LHC	RR	-	RR puncture, sheath insertion, LCA catheterisation
108	J.H.	2014.03.31	59	M	LHC	RR	-	RR puncture, sheath insertion, RCA catheterisation, assisting
109	P.P.	2014.03.31	53	M	LHC, PWS, LV, PCI	RR	LAD	RR puncture, sheath insertion, RCA and LCA catheterisation, assisting

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110	O.B.	2014.03.31	70	M	LHC, PWS, LV, PCI	RR	IM, CX	RR puncture, sheath insertion, assisting
111	O.B.	2014.04.03	42	F	LHC	RR	-	RCA catheterisation, assisting
112	P.P.	2014.04.03	53	M	LHC, PCI	RR	CX	RR puncture, sheath insertion, assisting
113	V.T.	2014.04.03	57	M	LHC, PWS	RR	-	RR puncture, sheath insertion, assisting
114	M.K.	2014.04.03	56	M	LHC, Graft	RF	-	Assisting
115	R.B.	2014.04.03	60	M	LHC, LV	RR	-	RR puncture, sheath insertion, RCA and LCA catheterisation
116	M.P.	2014.04.03	61	M	LHC, PWS	RR	-	RR puncture, sheath insertion, RCA and LCA catheterisation, assisting
117	P.L.	2014.04.03	66	M	LHC, PCI, IABP	RF, RR	RCA	Assisting
118	B.R.	2014.04.07	57	M	LHC, PWS	RR	-	RR puncture, sheath insertion, RCA and LCA catheterisation, assisting
119	M.R.	2014.04.07	68	F	LHC	RR	-	RR puncture, sheath insertion, RCA and LCA catheterisation
120	G.R.	2014.04.07	52	M	LHC, LV	RR	-	RR puncture, sheath insertion, RCA catheterisation, assisting
121	P.B.	2014.04.07	77	M	LHC, PCI, IVUS	RR	LAD	Assisting
122	H.L.	2014.04.07	94	F	LHC, PCI	LR	LAD	Assisting
123	N.S.	2014.04.07	39	M	LHC, PCI	RR	RCA	RR puncture, sheath insertion, assisting
124	V.C.	2014.04.10	66	F	LHC	RR	-	RR puncture, sheath insertion, RCA and LCA catheterisation
125	L.G.	2014.04.10	61	F	LHC, LV	RF	-	Assisting
126	K.A.	2014.04.10	71	M	LHC, Graft, PCI, IABP	LF, RF	SVG to RCA	Assisting
127	S.T.	2014.04.10	78	F	LHC, PWS, PCI	RR	CX	RR puncture, sheath insertion, RCA catheterisation, assisting
128	S.S.	2014.04.10	77	M	LHC, PCI	LR	LAD	Assisting
129	D.B.	2014.04.14	59	M	LHC	RR	-	RR puncture, sheath insertion, LCA catheterisation, assisting
130	S.S.	2014.04.14	66	F	LHC	RR	-	RR puncture, sheath insertion, RCA catheterisation, assisting
131	A.L.	2014.04.14	59	M	RHC, Ao	RR, RFV	-	RFV puncture, sheath insertion, assist
132	S.S.	2014.04.14	48	M	LHC	RR	-	Assisting
133	M.F.	2014.04.14	84	F	LHC	LR	-	LR puncture, sheath insertion, assisting
134	B.S.	2014.04.24	63	M	LHC	RR	-	RR puncture, sheath insertion, LCA catheterisation, assisting
135	L.S.	2014.04.24	77	M	LHC, PWS	RR	-	RR puncture, sheath insertion, assisting
136	P.T.	2014.04.24	53	F	LHC	RR	-	RR puncture, sheath insertion, RCA and LCA catheterisation

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137	C.W.	2014.04.24	74	F	LHC, Graft	LR	-	Assisting
138	A.L.	2014.04.24	59	M	RHC, LV	RR, RFV	-	RFV puncture, sheath insertion, assist
139	A.H.	2014.04.28	79	M	LHC, LV	LR	-	LR puncture, sheath insertion, RCA and LCA catheterisation
140	R.M.	2014.04.28	36	M	LHC, PCI	RR	LAD	Assisting
141	E.C.	2014.04.28	88	F	LHC	LR	-	LR puncture, sheath insertion, RCA and LCA catheterisation
142	K.K.	2014.04.28	69	M	LHC, Graft, Ao	RF	-	Assisting
143	A.R.	2014.04.28	81	M	LHC, Graft	LR	-	LR puncture, sheath insertion, RCA and LCA catheterisation
144	V.T.	2014.05.01	69	M	LHC	LR	-	LR puncture, sheath insertion, RCA and LCA catheterisation
145	R.F.	2014.05.01	54	M	LHC	RR	-	RR puncture, sheath insertion, RCA catheterisation, assisting
146	J.N.	2014.05.01	60	M	LHC, PWS	RR	-	RR puncture, sheath insertion, assisting
147	P.C.	2014.05.01	73	F	LHC	LR	-	RCA catheterisation, assisting
148	S.R.	2014.05.01	45	F	LHC, LV	RR	-	RR puncture, sheath insertion, RCA catheterisation, assisting
149	A.E.	2014.05.08	69	M	LHC, Graft	RF	-	Assisting
150	R.T.	2014.05.08	55	M	LHC, PCI	RR	RCA	RR puncture, sheath insertion, RCA and LCA catheterisation, assisting
151	Y.M.	2014.05.08	64	M	LHC	RF	-	LCA catheterisation, assisting
152	S.J.	2014.05.08	71	M	LHC, Graft, POBA	LR	CX	RR puncture, sheath insertion, RCA and LCA catheterisation, assisting
153	A.C	2014.05.08	73	M	LHC	RR	-	RR puncture, sheath insertion, assisting
154	J.A.	2014.05.08	85	M	LHC	LR	-	LR puncture, sheath insertion, LCA catheterisation, assisting
155	M.W.	2014.05.10	74	F	LHC	LR	-	Assisting
156	S.R.	2014.05.10	62	F	LHC, LV	RR	-	RR puncture, sheath insertion, RCA catheterisation, assisting
157	I.W.	2014.05.10	77	F	LHC	RR	-	RR puncture, sheath insertion, RCA catheterisation, assisting
158	A.E.	2014.05.10	66	F	LHC	LR	-	LR puncture, sheath insertion, RCA catheterisation, assisting
159	M.L.	2014.05.10	70	M	LHC, PWS	RR	-	RR puncture, sheath insertion, RCA catheterisation, assisting
160	C.H.	2014.05.10	69	M	LHC, LV, PCI	RR	CX	RR puncture, sheath insertion, RCA catheterisation, assisting
161	V.W.	2014.05.12	65	F	LHC	RR	-	RR puncture, sheath insertion, RCA catheterisation, assisting
162	S.V.	2014.05.12	79	F	LHC, PWS	LR	-	LR puncture, sheath insertion, RCA and LCA catheterisation, assisting
163	M.K.	2014.05.12	55	M	LHC, PWS, PCI, IVUS	RR	LAD	Assisting

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164	P.G.	2014.05.12	56	M	LHC, LV, Ao	RR	-	Assisting
165	Z.Z.	2014.05.12	74	F	LHC, PWS	LR	-	LR puncture, sheath insertion, RCA and LCA catheterisation, assisting
166	V.N.	2014.05.12	66	F	LHC	RR	-	RR puncture, sheath insertion, RCA and LCA catheterisation
167	S.R.	2014.05.12	78	M	LHC, Graft	LR	-	RCA catheterisation, assisting
168	P.Y.	2014.05.12	62	M	LHC, PWS	RR	-	Assisting
169	M.S.	2014.05.15	70	F	LHC, PWS	RR	-	Assisting
170	R.L.	2014.05.15	66	M	LHC, PWS, LV	RR	-	RR puncture, sheath insertion, RCA catheterisation, assisting
171	M.A.	2014.05.15	71	M	LHC, PCI	RR	CX	RR puncture, sheath insertion, RCA and LCA catheterisation, assisting
172	M.R.	2014.05.15	69	F	LHC, PWS, PCI	LR	LAD	Assisting
173	M.R.	2014.05.15	74	F	LHC	LR	-	LR puncture, sheath insertion, RCA and LCA catheterisation
174	M.K.	2014.05.17	57	M	LHC	RR	-	RCA and LCA catheterisation
175	A.M.	2014.05.17	75	F	LHC	LR	-	RCA and LCA catheterisation
176	P.M.	2014.05.17	73	F	LHC	RU	-	RCA and LCA catheterisation
177	M.Y.	2014.05.17	58	M	LHC, PCI	RR	CX	RCA and LCA catheterisation, assisting
178	O.R.	2014.05.17	81	F	LHC	LR	-	RCA and LCA catheterisation
179	P.W.	2014.05.17	79	M	LHC, PCI	LR	RCA	Assisting
180	P.N.	2014.05.17	56	F	LHC	RR	-	RCA and LCA catheterisation
181	D.C.	2014.05.17	68	M	LHC	RR	-	RR puncture, sheath insertion, RCA and LCA catheterisation
182	G.C.	2014.05.17	88	M	LHC, PCI	RF	IM, CX, LAD	Assisting
183	L.D.	2014.05.19	65	M	LHC	RR	-	RR puncture, sheath insertion, RCA and LCA catheterisation
184	D.C.	2014.05.19	81	M	LHC, PWS, PCI	RR	IM	RR puncture, sheath insertion, assisting
185	S.N.	2014.05.19	60	F	LHC	LR	-	LR puncture, sheath insertion, RCA and LCA catheterisation
186	K.N.	2014.05.19	67	F	LHC	LR	-	Assisting
187	I.G.	2014.05.19	68	M	LHC, Graft, Ao	LR	-	Assisting
188	S.P.	2014.05.19	64	M	LHC, PCI, IABP	RR, RF	LAD	Assisting
189	D.H.	2014.05.22	64	M	LHC	RR	-	RR puncture, sheath insertion, RCA and LCA catheterisation
190	D.H.	2014.05.22	79	M	LHC, LV	RR	-	Assisting
191	J.P.	2014.05.22	77	M	LHC, LV, PCI	RR	CX	Assisting



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192	G.W.	2014.05.22	87	M	LHC	LR	-	LR puncture, sheath insertion, assisting
193	S.F.	2014.05.22	84	F	LHC, LV	LR	-	RR puncture, sheath insertion, RCA and LCA catheterisation
194	I.G.	2014.05.22	68	M	LHC, PCI	RF	RCA	RF puncture, sheath insertion, assisting
195	R.J.	2014.05.29	68	M	LHC	RB	-	Assisting
196	S.P.	2014.05.29	64	F	LHC, PWS	RR	-	Assisting
197	M.H.	2014.05.29	68	F	LHC	RR	-	RR puncture, sheath insertion, RCA catheterisation, assisting
198	G.S.	2014.05.29	88	M	LHC	LR	-	RR puncture, sheath insertion, assisting
199	D.S.	2014.05.29	63	M	LHC, Graft	LR	-	RCA and LCA catheterisation
200	G.B.	2014.05.29	53	M	LHC, Ao, Graft	RR, LR	-	RR puncture, sheath insertion, RCA and LCA catheterisation, assisting
201	D.P.	2014.05.29	72	M	LHC	RR	-	RR puncture, sheath insertion, RCA and LCA catheterisation

ACh: acetylcholine study; Ao: aortogram; CTO: chronic total occlusion; CX: left circumflex coronary artery; F: female; Graft: Graft angiography; IABP: intraaortic balloon pump; IM: intermedier coronary artery; IVUS: intravascular ultrasound; LAD: left anterior descending coronary artery; LCA: left coronary artery; LHC: left heart catheterisation; LM: left main stem; LR: left radial artery; LV: left ventriculogram; M: male; PCI: percutaneous coronary intervention; POBA: plain old balloon angioplasty; PWS: pressure wire study; RB: right brachial artery; RCA: right coronary artery; RF: right femoral artery; RFV: right femoral vein; RR: right radial artery; RU: right ulnar artery.

Date: 31st May 2014

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Fellow

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