

## SUPPLEMENTAL MATERIAL

### Appendix 1. STICH Hypothesis 1 Treatment Crossovers/Reasons

Index Number*	RAR Score	Treatment Received	Crossover Reason Classification	Randomized Treatment	Reason for Crossover
M-AD1	10	CABG	Group 1: Acute decompensation	MED	Heart failure, ventricular tachycardia
M-AD2	3	CABG	Group 1: Acute decompensation	MED	Myocardial infarction with ICD discharge
M-AD3	26	CABG	Group 1: Acute decompensation	MED	Recurrent syncope, decompensation
M-AD4	10	CABG	Group 1: Acute decompensation	MED	ICD for recurrent ventricular tachycardia
M-AD5	31	CABG	Group 1: Acute decompensation	MED	Unstable heart failure with pulmonary edema
M-AD6	15	CABG	Group 1: Acute decompensation	MED	Tricuspid endocarditis
M-AD7	8	CABG	Group 1: Acute decompensation	MED	Heart failure requiring intra-aortic balloon pump
M-AD8	10	CABG	Group 1: Acute decompensation	MED	Pulmonary edema
M-AD9	1	CABG	Group 1: Acute decompensation	MED	Ventricular fibrillation, cardiac arrest
M-AD10	17	CABG	Group 1: Acute decompensation	MED	Worsening heart failure
M-AD11	16	CABG	Group 1: Acute decompensation	MED	Myocardial infarction after randomization
M-AD12	15	CABG	Group 1: Acute decompensation	MED	Cardiac arrest three months after randomization
M-AD13	19	CABG	Group 1: Acute decompensation	MED	Non-ST myocardial infarction
M-AD14	4	CABG	Group 1: Acute decompensation	MED	Angina, pulmonary edema
M-PS1	12	CABG	Group 2: Progressive symptoms	MED	Angina on medical therapy
M-PS2	22	CABG	Group 2: Progressive symptoms	MED	Unstable angina, syncope
M-PS3	12	CABG	Group 2: Progressive symptoms	MED	Angina, left ventricular failure
M-PS4	16	CABG	Group 2: Progressive symptoms	MED	Angina on aggressive medical therapy
M-PS5	20	CABG	Group 2: Progressive symptoms	MED	Increasing heart failure, Class III
M-PS6	21	CABG	Group 2: Progressive symptoms	MED	Angina, homeless patient
M-PS7	27	CABG	Group 2: Progressive symptoms	MED	Increasing dyspnea and angina on medical therapy
M-PS8	22	CABG	Group 2: Progressive symptoms	MED	Severe angina and dyspnea with any activity
M-PS9	20	CABG	Group 2: Progressive symptoms	MED	Increasing angina
M-PS10	23	CABG	Group 2: Progressive symptoms	MED	Rest dyspnea and angina
M-PS11	7	CABG	Group 2: Progressive symptoms	MED	Progressive dyspnea, shortness of breath
M-PS12	16	CABG	Group 2: Progressive symptoms	MED	Unstable angina
M-PS13	30	CABG	Group 2: Progressive symptoms	MED	Severe mitral regurgitation
M-PS14	20	CABG	Group 2: Progressive symptoms	MED	Increasing heart failure requiring hospital admission
M-PS15	15	CABG	Group 2: Progressive symptoms	MED	Persistent ischemia after PCI
M-PS16	10	CABG	Group 2: Progressive symptoms	MED	Pulmonary edema
M-PS17	8	CABG	Group 2: Progressive symptoms	MED	CCS III/IV angina
M-PS18	21	CABG	Group 2: Progressive symptoms	MED	Syncope, Class IV angina
M-PS19	12	CABG	Group 2: Progressive symptoms	MED	Unstable angina with untreatable symptoms
M-PS20	6	CABG	Group 2: Progressive symptoms	MED	Heart failure decompensation
M-PS21	3	CABG	Group 2: Progressive symptoms	MED	Angina, 3 mm ST depression on exercise test
M-PS22	9	CABG	Group 2: Progressive symptoms	MED	Class III/IV angina
M-PS23	15	CABG	Group 2: Progressive symptoms	MED	Class II/IV angina
M-PS24	3	CABG	Group 2: Progressive symptoms	MED	Early positive ETT

Index Number*	RAR Score	Treatment Received	Crossover Reason Classification	Randomized Treatment	Reason for Crossover
M-PS25	8	CABG	Group 2: Progressive symptoms	MED	Severe pain episodes
M-PS26	1	CABG	Group 2: Progressive symptoms	MED	Severe dyspnea, orthopnea
M-PS27	1	CABG	Group 2: Progressive symptoms	MED	Unstable angina
M-PS28	6	CABG	Group 2: Progressive symptoms	MED	Unstable angina
M-PS29	12	CABG	Group 2: Progressive symptoms	MED	Limited in daily activities
M-PS30	2	CABG	Group 2: Progressive symptoms	MED	Class IV angina on medical therapy
M-PF1	24	CABG	Group 3: Patient/family decision	MED	Family advised patient with three prior MIs
M-PF2	4	CABG	Group 3: Patient/family decision	MED	Patient insisted on CABG
M-PF3	4	CABG	Group 3: Patient/family decision	MED	Patient's wife insisted on CABG
M-PF4	1	CABG	Group 3: Patient/family decision	MED	Patient changed mind and chose CABG
M-PF5	17	CABG	Group 3: Patient/family decision	MED	Patient insisted on CABG after randomization
M-PF6	3	CABG	Group 3: Patient/family decision	MED	Relatives insisted on CABG
M-PF7	5	CABG	Group 3: Patient/family decision	MED	Patient/family decision after randomization
M-PF8	5	CABG	Group 3: Patient/family decision	MED	Relatives insisted on CABG
M-PF9	22	CABG	Group 3: Patient/family decision	MED	Patient changed mind and insisted on CABG
M-PF10	14	CABG	Group 3: Patient/family decision	MED	Patient changed mind
M-PF11	7	CABG	Group 3: Patient/family decision	MED	Patient changed mind four days after randomization
M-PF12	9	CABG	Group 3: Patient/family decision	MED	Relatives insisted on CABG
M-PF13	6	CABG	Group 3: Patient/family decision	MED	Relatives insisted on CABG
M-PF14	1	CABG	Group 3: Patient/family decision	MED	Relatives insisted on CABG
M-PF15	1	CABG	Group 3: Patient/family decision	MED	Patient changed mind
M-PF16	3	CABG	Group 3: Patient/family decision	MED	Change suggested by doctor friend
M-CD1	14	CABG	Group 4: Clinical decision	MED	Reversible ischemia on MRI
M-CD2	5	CABG	Group 4: Clinical decision	MED	Physician changed mind (3-vessel disease, <50% LM)
M-CD3	11	CABG	Group 4: Clinical decision	MED	Physician opinion difference (3-vessel and 33% LM)
M-CD4	9	CABG	Group 4: Clinical decision	MED	Physician opinion difference
M-CD5	13	CABG	Group 4: Clinical decision	MED	Physician opinion difference
C-DW1	10	MED	Group 1: Died waiting for operation	CABG	Patient requested home visit before CABG
C-DW2	11	MED	Group 1: Died waiting for operation	CABG	Died before CABG could have been scheduled
C-DW3	22	MED	Group 1: Died waiting for operation	CABG	Logistic reasons required a two-month delay of CABG
C-DW4	9	MED	Group 1: Died waiting for operation	CABG	Died two days after randomization
C-DW5	12	MED	Group 1: Died waiting for operation	CABG	Died during Christmas - 1 day before scheduled CABG
C-PF1	10	MED	Group 3: Patient/family decision	CABG	Family unsupportive of CABG
C-PF2	29	MED	Group 3: Patient/family decision	CABG	Patient changed mind
C-PF3	23	MED	Group 3: Patient/family decision	CABG	Patient changed mind
C-PF4	12	MED	Group 3: Patient/family decision	CABG	Died at home on medical therapy
C-PF5	14	MED	Group 3: Patient/family decision	CABG	Financial constraints, symptoms not severe
C-PF6	20	MED	Group 3: Patient/family decision	CABG	Patient concern for risk of operation
C-PF7	8	MED	Group 3: Patient/family decision	CABG	Reconsidered risk as too high
C-PF8	3	MED	Group 3: Patient/family decision	CABG	Patient changed mind

Index Number*	RAR Score	Treatment Received	Crossover Reason Classification	Randomized Treatment	Reason for Crossover
C-PF9	13	MED	Group 3: Patient/family decision	CABG	Family physician said no
C-PF10	31	MED	Group 3: Patient/family decision	CABG	Patient changed mind
C-PF11	31	MED	Group 3: Patient/family decision	CABG	Patient refused CABG
C-PF12	27	MED	Group 3: Patient/family decision	CABG	Feeling too good for CABG
C-PF13	7	MED	Group 3: Patient/family decision	CABG	Patient had PCI at non-STICH center
C-PF14	4	MED	Group 3: Patient/family decision	CABG	Patient decided risk too high
C-PF15	32	MED	Group 3: Patient/family decision	CABG	Patient became fearful
C-PF16	3	MED	Group 3: Patient/family decision	CABG	Fearful of planned redo CABG
C-PF17	14	MED	Group 3: Patient/family decision	CABG	Withdrew near time of operation
C-PF18	32	MED	Group 3: Patient/family decision	CABG	Patient's wife not supportive of CABG
C-PF19	32	MED	Group 3: Patient/family decision	CABG	Virus delayed/canceled CABG
C-PF20	22	MED	Group 3: Patient/family decision	CABG	Patient declined
C-PF21	13	MED	Group 3: Patient/family decision	CABG	Patient declined
C-PF22	20	MED	Group 3: Patient/family decision	CABG	Patient declined
C-PF23	11	MED	Group 3: Patient/family decision	CABG	Prostate cancer found
C-PF24	9	MED	Group 3: Patient/family decision	CABG	Patient declined CABG
C-PF25	7	MED	Group 3: Patient/family decision	CABG	URI delayed CABG, never performed
C-PF26	4	MED	Group 3: Patient/family decision	CABG	Patient feared CABG
C-PF27	19	MED	Group 3: Patient/family decision	CABG	Patient withdrew consent for redo CABG
C-PF28	11	MED	Group 3: Patient/family decision	CABG	Treated with cardiac pacing instead
C-PF29	9	MED	Group 3: Patient/family decision	CABG	Patient feared risk
C-PF30	30	MED	Group 3: Patient/family decision	CABG	Patient refused CABG
C-PF31	14	MED	Group 3: Patient/family decision	CABG	Patient refused CABG
C-PF32	7	MED	Group 3: Patient/family decision	CABG	Patient refused CABG and received PCI
C-PF33	7	MED	Group 3: Patient/family decision	CABG	Declined redo CABG
C-PF34	6	MED	Group 3: Patient/family decision	CABG	Declined redo CABG
C-PF35	2	MED	Group 3: Patient/family decision	CABG	Non-STICH physicians offered PCI
C-PF36	18	MED	Group 3: Patient/family decision	CABG	Patient's insurance carrier denied coverage
C-PF37	5	MED	Group 3: Patient/family decision	CABG	Declined as operation date neared
C-CD1	6	MED	Group 4: Clinical decision	CABG	While CABG waitlisted, patient had 1-vessel PCI
C-CD2	32	MED	Group 4: Clinical decision	CABG	Veins found to be too small for CABG conduit
C-CD3	10	MED	Group 4: Clinical decision	CABG	Lung cancer found, no CABG
C-CD4	21	MED	Group 4: Clinical decision	CABG	Poor lung function, PCI not CABG performed
C-CD5	9	MED	Group 4: Clinical decision	CABG	Veins inadequate for conduit
C-CD6	1	MED	Group 4: Clinical decision	CABG	Coronary "lesion" was spasm
C-CD7	14	MED	Group 4: Clinical decision	CABG	Surgeons reassessed risk
C-CD8	9	MED	Group 4: Clinical decision	CABG	Risk reassessed as too high - EF 0.11, not 0.24
C-CD9	19	MED	Group 4: Clinical decision	CABG	Risk reassessed as too high - EF 11% with MR
C-CD10	7	MED	Group 4: Clinical decision	CABG	Arrhythmia ablation instead of CABG chosen
C-CD11	17	MED	Group 4: Clinical decision	CABG	Non-viable test result after randomization
C-PM1	9	MED	Group 5: Provider miscommunication	CABG	Research to clinical staff

<b>Index Number*</b>	<b>RAR Score</b>	<b>Treatment Received</b>	<b>Crossover Reason Classification</b>	<b>Randomized Treatment</b>	<b>Reason for Crossover</b>
C-PM2	18	MED	Group 5: Provider miscommunication	CABG	Cardiology to research staff

\*coded version to protect patient ID numbers