

情報 NO.	基本情報				装置技術			技術適用疾病		技術基本能力						
	題名 サマリー	著者	雑誌名 Medline Index	機器技術名称	製品 情報	疾病名称系		重複症系		適用療法系			正確 性、確 実性	迅速 性、反 応性	早期診断 性(予 見性・ 予知性)	インテ リジェ ンシー
						一般名称 ICD-10分類	疾病の severity	疾病の複 雑性	その他リ スクの程 度	手法・処置名称 コード	その他併用 療法	対比療法				
34	Albumin in the cardiopulmonary bypass prime: how little is enough? *心臓バイパスにおける血小振数低下を押さえるためpump primeに添加するalbuminの適正量を試験し、0.0375 g albumin/100 ml primeという結果を得た。	Palanzo DA, Zarro DL, Montesano RM, Mantley NJ.	Perfusion 1999 May;14(3):167-72 10411245	hollow-fiber membrane oxygenators	Sarns Turbo oxygenator, Medtronic Maxima-PRF oxygenator	coronary artery disease				hollow-fiber membrane oxygenators with 0.0375 g of albumin/100 ml of prime	with 0.125 g of albumin/100 ml of prime					
35	Reducing the post-pump syndrome by using heparin-coated circuits, steroids, or aprotinin.	Harig F, Feyrer R, Mahmoud FO, Blum U, von der Ende J.	Thorax Cardiovasc Surg 1999 Apr;47(2):111-8 10363611	Bioline by Jostra (group C)	heparin-coated circuits	coronary artery disease				heparin-coated circuits (group C)	group A pre-dnisolone pre- and postoperatively 2 x 25 0mg) Eaprotinin preoperatively (6Mlo, KLU), no special measures					
36	Reduced release of tissue factor by application of a centrifugal pump during cardiopulmonary bypass. *心臓バイパス中に使用する、遠心ポンプとローラーポンプとの比較試験。血球のダメージの差、血栓、塞栓等で観察したが差がなかった。超音波ドプラは微小な泡を検知してポンプの血栓を測定してポン	Babin-Ebell J, Misoph M, Mulliges W, Neukam K, Elert O.	Heart Vessels 1998;13(3):147-51 10328185	centrifugal pumps		coronary artery disease				centrifugal pumps	roller pump					

情報 NO.	基本情報	技術基本能力										予防系	
		題名 サマリ	治癒性	副作用・治癒率	救命率・生存率	再発率・予防率	その他の予後リスク	感受性(疾病)即効性・適用性・機能的性	影響性(免疫性・炎症性(合併症), その他のリスク)	機能回復性	病態維持性	健康改善性	健康維持性
34	Albumin in the cardiopulmonary bypass prime: how little is enough? *心臓バイパスにおける血小板数低下を押しやるためのpump primeに添加するalbuminの適正量を試験し、0.0375 g albumin/100 ml primeと比較した。	The net platelet count drops for the study groups were as follows: Sarns oxygenator with no albumin in the prime = 11.8+/-12.5%, Sarns oxygenator with 0.0375 g of albumin/100 ml prime = -3.7+/-10.8%, Sarns oxygenator with 0.125 g of albumin/100 ml prime = -2.0+/-12.6%, Medtronic oxygenator with no albumin in the prime = 20.1+/-14.5%, Medtronic oxygenator with 0.0375 g albumin/100 ml prime = -6.9+/-8.7%, and Medtronic oxygenator with 0.125 g albumin/100 ml prime = -14.0+/-12.4%. Our results illustrate that adding as little as 0.0375 g albumin/100 ml prime (3 ml of 25% solution/2000 ml of prime) to the pump prime elicits the beneficial											
35	Reducing the post-pump syndrome by using heparin-coated circuits, steroids, or aprotinin.	In group A, IL-6 and IL-8 was significantly ($p < 0.05$) suppressed in contrast to group D (A vs D; peak at 4h, 155pg/ml vs 8h, 565). A vs D; peak at 30', 22pg/ml vs 55). IL-10 was markedly upregulated (A vs D; peak at 30', 1600pg/ml vs 130pg/ml). In group B the cytokine release was similar to A. Group C led to a significant IL-10 upregulation (peak at 2h, 1380pg/ml) and IL-8 suppression (peak at 4h, 290pg/ml).											
36	Reduced release of tissue factor by application of a centrifugal pump during cardiopulmonary bypass. *心臓バイパス中に使用する、遠心ポンプとローラーポンプとの比較試験。血球のダメージの差、血栓、塞栓等で観察したが差が無かった。超音波ドブラーは微小な泡を検知してしまい、血栓を測定してポンプ	the centrifugal pump group released a lower tissue factor (TF) release compared with the roller group (5681(696-10359) vs 12681(6383-17538) micro X min / (median (lower -upper quartiles); $P=0.009$). In contrast, TAT and F1+2 formation did not differ between the groups, and neither did the embolus count of both Doppler system. Embolus did not correlate with TAT or F1+2 formation.											

情報 NO.	基本情報	技術補完能力														
		親和性(複合技術)		信頼性・安全性			運用性					患者QOL系				
		他技術との 融合性	相乗効果の 程度	故障率	安全性	アウトカムの 安定性 結果の均一性、 再現性	その他のリスク ヘッジ能力	操作性	安定性	可搬性	管理性・ 保管性	規格・標準 適用性	人材育成・ト レーニングの 簡便性	生物レベルのQOL (個への対応、身体的影響性、精神 的影響性、生命への影響)	生活レベルの QOL (個への対応性、 生活行動能力へ の影響、社会復帰 率、その他)	
34	<p>題名 サマリー</p> <p>Albumin in the cardiopulmonary bypass prime: how little is enough? *心臓バイパスにおける血小板数低下を押さえるためのpump primeに添加するalbuminの適正量を試験し、0.0375 g albumin/100 ml primeという結果を得た。</p>															
35	<p>Reducing the post-pump syndrome by using heparin-coated circuits, steroids, or aprotinin.</p>															
36	<p>Reduced release of tissue factor by application of a centrifugal pump during cardiopulmonary bypass. *心臓バイパス中に使用する、遠心ポンプとローターポンプとの比較試験。血球のダメージの差、血栓形成等の観察した結果が驚かした。超音波ドブラーは微小な泡を検知してしまい、血栓を測定してポン</p>															

情報 NO.	基本情報	技術補足情報1				技術補足情報2				その他		
		その他のGOAL (技術能力の改善、理解性、治療効果の改善、安全性、社会損失の軽減、その他)	家族(社会)のGOAL 生物レベルのGOAL 生活レベルのGOAL その他のGOAL	機器コスト系 機器本体コスト、周辺機器コスト、その他設備コスト	運用コスト系 労務費、材料費、経費、その他費用	必要リソース 技術、設備数、量、種類、スタッフ数、消耗品数量、その他	医療経済学的分析系 CBA, AEA, AU, DALY, その他	技術評価系 公的保険上、自由保険上、その他	結果自身に関するコメント	調査条件	その他	
34	<p>Albunin in the cardiopulmonary bypass prime: how little is enough? *心臓バイパスにおける血小板数低下を抑制するためにpump primeに添加するalbuminの適正量を試験し、0.0375 g albumin/100 ml primeという結果を得た。</p>									80 patients	<p>Our results illustrate that adding as little as 0.0375 g albumin/100 ml prime (3 ml of 25% solution/2000 ml of prime) to the pump prime elicits the beneficial effects of surface coating on platelet loss during CPB.</p>	
35	<p>Reducing the post-pump syndrome by using heparin-coated circuits, steroids, or aprotinin.</p>									10 patients in each group	<p>The results show a similar reduction of the inflammatory cytokine release (IL-6 and IL-8 as markers) using early steroid application and aprotinin in high dosage. Heparin coating reduces IL-6 and increases IL-10 release, whereas IL-8 is not affected. Further studies should investigate the effects of a combined application for the Doppler systems seem to detect mainly microbubbles, conclusions regarding difference between the two groups in the formation of thrombofibrinous clots cannot be drawn.</p>	
36	<p>Reduced release of tissue factor by application of a centrifugal pump during cardiopulmonary bypass. *心臓バイパス中に使用する、遠心ポンプとローラーポンプとの比較試験。血球のダメージの差、血栓形成等で観察したが差がなかった。超音波ドプラーは微小な泡を検知してしまい、血栓を測定してポンプ</p>									60 patients, 30 each		

情報 NO.	基本情報			機器技術		技術適用疾病		重篤症系				適用療法系			技術基本能力		
	題名 サマリー	著者	雑誌名 Medline Index	機器技術名称	製品 情報	疾病名称系 ICD-10分類	疾病の severity	疾病の規模	疾病の複雑性	その他の リスクの程度	手技・処置名称 コード	その他併用 療法	対比療法	正確 性・確 実性	迅速 性・反 応性	早期診断 性(予見性・ 予知性)	インテ リジェ ンシー
37	Heparin-coated circuits for high-risk patients: a multicenter, prospective, randomized trial.	Ranucci M, Mazzucco A, Pessotto R, Grillone G, Casati V, Porreca L, Maggioni R, Mehi M, Magagna P, Cimi S, Giomarelli P, Lorusso R, de Jong A.	Ann Thorac Surg 1999 Apr;67(4):994-1000 10320241	Duffalo II heparin coated circuit(HCC group)		coronary artery disease	high risk patient		at least one patient-related or procedure-related risk factor were enrolled in a multicenter study		heparin coated circuit(HCC group)		conventional circuit(control group)				
38	Inflammatory response to cardiopulmonary bypass using roller or centrifugal pumps.	Baufreton C, Intrator L, Jensen PG, te Velthuis H, Le Besnerais P, Vonk A, Farcet JP, Wildevuur CR, Loiseance DY.	Ann Thorac Surg 1999 Apr;67(4):972-7 10320237	roller pump		coronary artery disease					centrifugal pump(CFP)		roller pump				
39	Effects of a leucocyte depleting arterial line filter on perioperative proteolytic enzyme and oxygen free radical release in patients undergoing aortocoronary bypass surgery.	Mair P, Hoermann C, Mair J, Margreiter J, Puschendorf B, Balogh D.	Acta Anaesthesiol Scand 1999 Apr;43(4):452-7 10225080	leucocyte-specific arterial line filter(LG-6 group)	le filter to leachiv e leucoc yte depleti on during clinical perfus	coronary artery disease							standard arterial line filter(AV-6 group)				
40	Hematologic evaluation of cardiopulmonary bypass circuits prepared with a novel block copolymer.	Rubens FD, Labow RS, Lavallec GR, Watson MI, Robblee JA, Voorhees ME, Nathan HJ.	Ann Thorac Surg 1999 Mar;67(3):889-96;discussion 898-10215212	CPB circuit prepared with a triblock-copolymer	polycarbonate/polydimethylsiloxane-polycarbonate	coronary artery disease					CPB circuit prepared with a triblock-copolymer		standard circuit				

情報 NO	技術基本能力										予防系	
	題名 サマリー	治癒性	療法 薬・装置	救命率・生存率	再発率・予防 率	その他の予後リスク	感受性(疾病) 副作用, 適用症, 禁忌症	影響性 疫学性, 病原性, 併発 性(合併症), その他 リスク	機能回復性	病態維持性	健康改善性	健康維持性
37	Heparin-coated circuits for high-risk patients: a multicenter, prospective, randomized trial.	HCC is associated with a shorter intensive care unit and postoperative hospital stay and with a lower rate of patients having a severely impaired clinical outcome(stay in ICU for more than 5 days or death)(relative risk 0.66,p=0.045). Lung dysfunction rate was significantly lower for the patients in HCC group affected by chronic obstructive pulmonary disease or who had mitral proesdure(relative risk, respectively,0.31,p=0.018 and 0.05,p=0.02). Renal dysfunction rate was significantly(p=0.05)lower for diabetics in the HCC group(relative risk 0.28)	HCC is associated with a shorter intensive care unit and postoperative hospital stay and with a lower rate of patients having a severely impaired clinical outcome(stay in ICU for more than 5 days or death)(relative risk 0.66,p=0.045).	Lung dysfunction rate was significantly lower for the patients in HCC group affected by chronic obstructive pulmonary disease or who had mitral proesdure(relative risk, respectively,0.31,p=0.018 and 0.05,p=0.02). Renal dysfunction rate was significantly(p=0.05)lower for diabetics in the HCC group(relative risk 0.28)					HCC is associated with a shorter intensive care unit and postoperative hospital stay and with a lower rate of patients having a severely impaired clinical outcome(stay in ICU for more than 5 days or death)(relative risk 0.66,p=0.045).			Lung dysfunction rate was significantly lower for the patients in HCC group affected by chronic obstructive pulmonary disease or who had mitral proesdure(relative risk, respectively,0.31,p=0.018 and 0.05,p=0.02). Renal dysfunction rate was significantly(p=0.05)lower for diabetics in the HCC group(relative risk 0.28)
38	Inflammatory response to cardiopulmonary bypass using roller or centrifugal pumps.	Release of SC5b-9 after stopping CPB and after protamine administration was higher in the CFP group(p=0.01 and p=0.004). Elastase level was higher after stopping CPB in the CFP group(p=0.006). Multivariate analysis confirmed differences between roller pump and CFP group in complement and neutrophil activation:IL-8 levels were higher in CFP group, 2 hours after starting CPB(p<0.002).										
39	Effects of a leucocyte depleting arterial line filter on perioperative proteolytic enzyme and oxygen free radical release in patients undergoing extracorporeal circulation adn peroperative CX MB aortocoronary bypass surgery.	White cell count, differential white cell count, malondialdehyde and C-reactive protein were not significantly different between the two groups. Plasma elastase concentration were significantly(P<0.03)higher during and immediately after extracorporeal circulation in LG-6 group. Need for inotropic support, arterial pO2 after extracorporeal circulation adn peroperative CX MB mass and tponnin 1 release were not different between the two groups.										
40	Hematologic evaluation of cardiopulmonary bypass circuits prepared with a novel block copolymer.	There was a progressive increase in thrombin generation only in the control group during bypass. The test surface decreased the release of tissue plasminogen activator and plasmin-alpha2-antiplasmin complex formation(p<0.006). There was an increased platelet count and a decreased platelet activation in the test group(p=0.017). There was significantly more debris that accumulated on arterial filter in the control group										

情報 NO.	基本情報		技術付帯能力											
	技術補完能力		信頼性・安全性					運用性					患者QOL系	
	他技術との 適合性	相乗効果の 程度	故障率	安全性	アウトカムの 安定性 結果の均一性、 再現性	その他のリスク ヘッソ能力	操作性	安定性	可搬性	管理性・ 保守性	規格・基準 適用性	人材育成・ トレーニングの 簡便性	生物レベルのQOL (個への対応、身体的影響性、精神 的影響性、生命への影響)	生活レベルの QOL (個への対応性、 生活行動能力へ の影響、社会復帰 等、その他)
37													the use of HCC in postoperative times decrease and have a protective effect on lung and kidney function in high risk patients	HCC is associated with a shorter hospital stay and with a lower rate of patients having a severely impaired clinical outcome(stay in ICU for more than 5 days or death)(relative risk 0.66,p=0.045).
38														
39														
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情報 NO.	基本情報				技術補足情報1				技術補足情報2				その他		
	題名 サマリー	その他のQOL (技術能力の改善、 明瞭な結果、治療 効果の改善、副作用 の軽減、患者の満足 、等、その他)	家族(社会)のQOL			機器コスト系	運用コスト系	必要リソース	医療経済学的 分析系	技術評価 系	結果自身に関するコメント	調査条件	その他		
			生物レベルの QOL	生活レベルの QOL	その他の QOL										
37	Heparin-coated circuits for high-risk patients: a prospective, randomized trial.				機器本体コスト、 周辺機器コスト、 その他設備コスト	労務費、材料費、 経費、その他費用	施設、設備費、 賃借料、 メンテナンス費、 消耗品費、その他	CBA, AEA, AU A, DALY, その他	公的医療上、 自由診療上、 その他	結果自身に関するコメント the use of HCC in postoperative times decrease and have a protective effect on lung and kidney function in high risk patients	HCC group:n=442, control group:n=444				
38	Inflammatory response to cardiopulmonary bypass using roller or centrifugal pumps.									during the operation, CFP caused greater complement and neutrophil activation, after the operation the inflammatory response was similar in both groups	roller pump group:n=14				
39	Effects of a leucocyte depleting arterial line filter on perioperative proteolytic enzyme and oxygen free radical release in patients undergoing aortocoronary bypass surgery.									our data do not support the routine use of a leucocyte depleting arterial line filter during clinical perfusion in patients undergoing elective aortocoronary bypass surgery	20 patients in each group				
40	Hematologic evaluation of cardiopulmonary bypass circuits prepared with a novel block copolymer.									This clinical trial has demonstrated a significant difference in the hematologic effects of the test circuits, with evidence of platelet preservation, decreased fibrinolysis, and decreased thrombin generation. A larger trial would be necessary to establish	34 patients				

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	題名 サマリー	著者	雑誌名 Medline Index	機器技術名称	製品 情報	疾病名称 ICD-10分類	疾病の severity	疾病の規 模	疾病の複 雑性	その他リ スクの程 度	手技・処置名称 コード	その他併用 療法	対比療法	正確 性・確 実性	迅速 性・反 応性	早期診断 性 (予異性・ 予知性)	インテ リジェ ンシー
41	Leukocyte depletion during cardiac operation: a new approach through the venous bypass circuit.	Gu Y.J, de Vries A.J, Vos P, Boonstra P.W, van Oeveren W.	Ann Thorac Surg 1999 Mar;67(3):604-9 10215195	leukocyte filtration		coronary artery disease					leukocyte filtration in the venous bypass circulation	no leukocyte filtration					
42	Pump prime only aprotinin inhibits cardiopulmonary bypass-induced neutrophil CD11b up-regulation.	Alonso A, Whitten CW, Hill GE.	Ann Thorac Surg 1999 Feb;67(2):392-5 10197659	pump prime only aprotinin(280 mg)		coronary artery disease					pump prime only aprotinin(280mg)	no aprotinin					
43	Heparin-coated cardiopulmonary bypass equipment. II. Mechanisms for reduced complement activation in vivo.	Videm V, Molines TE, Bergh K, Fosse E, Mohr B, Hage TA, Aasen AO, Svennevig JL	J Thorac Cardiovasc Surg 1999 Apr;117(4):803-9 10096977	Duraflo II heparin-coated CPB set		coronary artery disease					heparin-coated CPB set	ur-coated					

情報 NO.	基本情報	技術基本能力										療養系		予防系			
		治癒系	治癒性	死亡率・治療率	救命率・生存率	再発率・予防率	その他の予後リスク	感受性(疾病) 即効性・適用性・選択性	影響性 副作用・併発性・併症(合併症)・その他のリスク	機能回復性	病態維持性	健康改善性	健康維持性				
41	Leukocyte depletion during cardiac operation: a new approach through the venous bypass circuit.		Circulating leukocytes were reduced by 38% in the depletion group compared with the control group at the moment of cross-clamp release(4.3x10 ⁹ /L vs 6.8x10 ⁹ /L, p<0.05). Clinically there was no difference between in postoperative Pao ₂ or pulmonary hemodynamics														
42	Pump prime only aprotinin inhibits cardiopulmonary bypass-induced neutrophil CD11b up-regulation.		The control group demonstrated a significant(p<0.05) increase in neutrophil CD11b immunofluorescent staining at 50 min. of CPB and at 30 min. after CPB when compared to same group baseline and to the pump prime only aprotinin group.														the pump prime only dose of aprotinin is also reported to be effective at reducing post-CPB bleeding and transfusion requirement
43	Heparin-coated cardiopulmonary bypass equipment. II. Mechanisms for reduced complement activation in vivo.		C1 was activated during bypass, and increases in C1s-C1 inhibitor complexes were larger with heparin coating(P=0.03). C4bc increased after administration of protamine, without intergroup differences(P=0.69). Bb(P=0.22) and C5a0desArg (P=0.13) tended to increase less with heparin coating. Formation of C3bc(P=0.03) and the terminal complement complex(P<0.01) was significantly reduced with heparin coating. C5a-desArg increased 2-fold during bypass, whereas the terminal complement complex increased 10- to 20-fold. Maximal terminal complement complex concentration were significantly correlated to maximal Bb and C3bc(R=0.6, P<0.001), but not to C1s-C1 inhibitor complexes or C4bc(R<0.05, P>0.08)														

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	題名 サマリー	相乗効果の 程度	信頼性・安全性		運用性					患者QOL系								
			他技術との 融合性	故障率	安全性	アウトカムの 安定性 結果の均一性・ 再現性	その他のリスク ヘッジ能力	操作性	安定性	可搬性	管理性・ 保管性	規格・基準 適用性	人材育成・ トレーニングの 簡便性	生物レベルのQOL (個への対応、身体的影響性、精神 的影響性、生命への影響)	生活レベルの QOL (個への対応性、 生活行動能力への 影響、社会復帰 等、その他)			
41	Leukocyte depletion during cardiac operation: a new approach through the venous bypass circuit.																	
42	Pump prime only aprolmin inhibits cardiopulmonary bypass-induced neutrophil CD11b up-regulation.																	
43	Heparin-coated cardiopulmonary bypass equipment. II. Mechanisms for reduced complement activation in vivo.																	

情報 NO.	基本情報				技術補足情報1			技術補足情報2			その他	
	題名 サマリー	その他のQOL (技術能力の提 新・型修正、治療 効果の体感・確認 性、機会損失の影 響、その他)	家族(社会)のQOL		機器コスト系	運用コスト系	必要リソース	医療経済学的 分析系	技術評価 系	結果自身に関するコメント	調査条件	その他
		生物レベルの QOL	生活レベルの QOL	その他の QOL	機器本体コスト、 風切面装置コスト、 その他設置コスト	労務費、材料費、 経費、その他費用	施設、設備敷 置、環境、ス タッフ量、消耗 品数量、その他	CBA, AEA, AU A, DALY, その他	公的医療上、 自由医療上、 その他			
41	Leukocyte depletion during cardiac operation: a new approach through the venous bypass circuit.									It is technically feasible to deplete circulating leukocytes through the venous side of the cardiopulmonary bypass circuit with a low blood flow rate. Future studies should focus on the duration and timing of leukocyte depletion to optimize the methodology of leukocyte depletion for cardiac surgical patients.	20 patients in each group	
42	Pump prime only aprotinin inhibits cardiopulmonary bypass-induced neutrophil CD11b up-regulation.									the salutary effect of pump prime only aprotinin suggests that such low-dose regimens can be cost effective.	control:n=12, pump prime only aprotinin:n=10	
43	Heparin-coated cardiopulmonary bypass equipment. II. Mechanisms for reduced complement activation in vivo.									C1 activation during bypass was increased by heparin coating, but further classical pathway activation was held in check until administration of protamine. Heparin coating significantly inhibited C3bc and terminal complement complex formation. Terminal complement complex concentrations were related to alternative pathway activation and may be useful for evaluation of differences in bypass circuitry. Increases and intergroup differences in	coated set:n=15, uncoated set:n=14	

情報 NO.	基本情報				機器技術				技術適用疾病				技術基本能力					
	題名 サマリー	著者	雑誌名 Medline Index	機器技術名称	製品 情報	疾病名体系			重症度系			適用療法系			正確 性、確 実性	迅速 性、反 応性	早期診断 性 (予見性・ 予知性)	インテ リンエ ンジー
						一般名称 ICD-10分類	疾病の 規模	疾病の 重症性	その他リ スクの程 度	手技・処置名称 コード	その他併用 療法	対比療法						
44	Heparin-coated cardiopulmonary bypass equipment. I. Biocompatibility markers and complications in a high-risk population.	Videm V, Molines TE, Fosse E, Mohr B, Bergh K, Hagve TA, Aasen AO, Sverreng JL	J Thorac Cardiovasc Surg 1999 Apr;117(4):794-802 10096976	Duraflo II heparin-coated CPB set		coronary artery disease	high risk patient				heparin-coated CPB set	un-coated			no clearcut relationship between the terminal complement complex and outcome was found, the Higgs' score was significantly related to			
45	Does activated neutrophil depletion on bypass by leukocyte filtration reduce myocardial damage? A preliminary report	Di Salvo C, Louca LL, Patichis K, Hooper J, Walesby RK	J Cardiovasc Surg (Torino) 1996 Dec;37(6 Suppl 1):93-100 10064358	PALL medical leukocyte filter		unstable angina	urgent coronary artery bypass				leukocyte filtration	arterial line filter without leukocyte filtration						
46	Serum S100beta release after coronary artery bypass grafting: roller versus centrifugal pump.	Ashraf S, Bhattacharya K, Zacharias S, Kaul P, Kay PH, Watterson KG	Ann Thorac Surg 1998 Dec;66(6):1958-62 9830476	centrifugal pumps		coronary artery disease					centrifugal pumps	roller pump			24hour S100beta levels correlated with intubation time r=0.40, p=0.04			
47	Inflammatory response to cardiopulmonary bypass using two different types of heparin-coated extracorporeal circuits.	Baufreton C, Moczar M, Inrator L, Jansen PG, te Vethuis H, Le Besnerais P, Farcet JP, Wildevuur CR, Loisanse DY	Perfusion 1998 Nov;13(6):419-27 9881389	Duraflo II equipment (group 1)	heparin coated extracorporeal	coronary artery disease					heparin coated extracorporeal circuit	Carmeda equipment (group 2)						
48	Response of the cellular immune system to cardiopulmonary bypass is independent of the applied pump type and of the use of heparin-coated surfaces.	Miscoph M, Schwender S, Babin Ebell J	Thorac Cardiovasc Surg 1998 Aug;46(4):222-7 9776497	roller pump, centrifugal pump, and uncoated and heparin-coated surfaces		coronary artery disease					group C, centrifugal pump together with Carmeda heparin-coated surface	group A, roller pump, group B, centrifugal pump.						

情報 NO.	基本情報	技術基本能力												
		治癒系	治療性	根治 率・治 癒率	救命率・生存率	再発率・予防 率	その他の予後リスク	感受性(疾病) 即効性、速効性、持続性	影響性 保護性、有用性、排 他(合併症)、その他の リスク	機能的回復性	病態維持性	予防系		
44	Heparin-coated cardiopulmonary bypass equipment. I. Biocompatibility markers and development of complications in a high-risk population.	approximately 50% of the variation in granulocyte activation was explained by complement(P<0.01) and platelet activation(P<0.05), heparin/protamine dose ratio(P=0.02), duration of CPB(P<0.01) and gender			complications developed in 53 patients(34%) equivalently in both group(P=0.44-0.82)									
45	Does activated neutrophil depletion on bypass by leukocyte filtration reduce myocardial damage? A preliminary report.	Preliminary results show little change in the total leukocyte count but the Troponin T and CPK/MB values were lower in the filtered group than in the control group and an increased level of total Glutathione in the filter group showed that there was less oxidated stress on the myocardium.												
46	Serum S100beta release after coronary artery bypass grafting: roller versus centrifugal pump.	Postoperative serum S100beta levels were significantly higher in both groups than preoperative levels. There was no difference in C100beta levels between the groups at any of the time points.												
47	Inflammatory response to cardiopulmonary bypass using two different types of heparin-coated extracorporeal circuits.	The release of SC5b-9 after CPB and after protamine administration was lower in group 2 than group 1(p=0.0002 and p=0.006). A significant production of cytokines was detected in both groups with peak values observed within the time range of 4-6h after the start of CPB.												
48	Response of the cellular immune system to cardiopulmonary bypass is independent of the applied pump type and of the use of heparin-coated surfaces.	Response of the cellular immune system to cardiopulmonary bypass is independent of the applied pump type and of the use of heparin-coated surfaces. The difference between group B and C were restricted to single time points. Neither A and B, nor B and C differed significantly in the relative distribution of lymphocyte subpopulation or in the percentage of CD126+, HLA-FR+, CD45 RO+ and CD71+ leukocyte subpopulations.												response of the cellular immune system to CPB is independent of the applied CPB circuit.

情報 NO.	基本情報	技術補完能力										技術付帯能力			
		親和性(複合技術)				信頼性・安全性			運用性			患者QOL系			
		他技術との 融合性	相乗効果の 程度	故障率	安全性	アウトカムの 安定性 結果の均一性、 再現性	その他のリスク ヘッジ能力	操作性	安定性	可搬性	管理性・ 保管性	規格・基準 適用性	人材育成・ト レーニングの 簡便性	生物レベルのQOL (個への対応、身体的影響性、精神 的影響性、生命への影響)	生活レベルの QOL (個への対応性、 生活行動能力へ の影響、社会環境 等、その他)
44	Heparin-coated cardiopulmonary bypass equipment. I Biocompatibility markers and development of complications in a high-risk population.														
45	Does activated neutrophil depletion on bypass by leukocyte filtration reduce myocardial damage? A preliminary report														
46	Serum S100beta release after coronary artery bypass grafting: roller versus centrifugal pump.														
47	Inflammatory response to cardiopulmonary bypass using two different types of heparin-coated extracorporeal circuits.														
48	Response of the cellular immune system to cardiopulmonary bypass is independent of the applied pump type and of the use of heparin-coated surfaces.														CPB affects the cellular immune system; however, this effect seems to be a physiological reaction, independent of the applied CPB circuit system

情報 NO.	基本情報			技術補足情報1			技術補足情報2			その他		
	題名 サマリー	生物レベルの GOL	生活レベルの GOL	その他の GOL	機器コスト系	運用コスト系	必要リソース	医療経済学的 分析系	技術評価 系	検査条件	その他	
	その他のGOL (技術能力の技 術・信頼性、治療 効果の体感、適応 性、患者満足等の影 響、その他)				機器本体コスト、 附加装置コスト、 その他設備コスト	労務費、材料費、 経費、その他費用	施設、設備費、 薬、材料費、ス タッフ費、消耗 品数量、その他	CBA, AEA, AU A, DALY, その他	公的医療上、 自由医療上、 その他	結果自身に関するコメント		
44	Heparin-coated cardiopulmonary bypass equipment. I. Biocompatibility markers and development of complications in a high-risk population.									heparin coated in =81, uncoated n=75		
45	Does activated neutrophil depletion on bypass by leukocyte filtration reduce myocardial damage? A preliminary report.									Currently this filter is an expensive addition to bypass surgery but these preliminary results suggest that activated neutrophil depletion on bypass may be of benefit to patients with unstable angina, impending myocardial necrosis and low ejection fraction.	Ten patients each	
46	Serum S100beta release after coronary artery bypass grafting: roller versus centrifugal pump.									S100beta levels increased after coronary artery bypass grafting. Centrifugal pumps do not significantly decrease S100beta release. Persistently increased S100beta levels are associated with longer intubation times.	32 patients	
47	Inflammatory response to cardiopulmonary bypass using two different types of heparin-coated extracorporeal circuits.										30 patients	
48	Response of the cellular immune system to cardiopulmonary bypass is independent of the applied pump type and of the use of heparin-coated surfaces.									CPB affects the cellular immune system; however, this effect seems to be a physiological reaction, independent of the applied CPB circuit system	73 patients	

情報 NO.	基本情報				機器技術		技術適用疾病		技術基本能力						
	題名 サマリー	著者	雑誌名 Medline Index	機器技術名称	製品 情報	疾病名称系		重症度系		適用療法系			迅速 性、反 応性	早期診断 性 (予見性・ 予知性)	インテ リジェ ンス
						一般名称 ICD-10分類	疾病の severity	疾病の 規模	疾病の複 雑性	その他リ スクの程 度	手技-処置名称 コード	その他併用 療法			
49	Heparin-coated bypass circuits: effects on inflammatory response in pediatric cardiac operations.	Schreurs HH, Wijers MJ, Gu YJ, van Oeveren W, van Domburg RT, de Boer JH, Bogers AJ.	Ann Thorac Surg 1998 Jul;66(1):166-71 9692458	Carmeda BioActive Surface bypass circuit	heparin coated extracorporeal	coronary artery disease				heparin coated extracorporeal circuit		noncoated circuit			
50	Superiority of centrifugal pump over roller pump in paediatric cardiac surgery: prospective randomised trial.	Morgan IS, Godisposi M, Sanger K, Mankad PS.	Eur J Cardiothorac Surg 1998 May;13(5):526-32 9663533	Medtronic Biomedicus	roller pump	cardiac disease		children(a ge 2dat- 13years)		a centrifugal pump		roller pump			
51	Clinical evaluation of a leucocyte-depleting blood cardioplegia filter (BCIB) for elective open-heart surgery.	Suzuki I, Ogoshi N, Chiba M, Komatsu T, Moizumi Y.	Perfusion 1998 May;13(3):205-10 9638718	Pall BCIB	leucocyte-depleting blood cardioplegia					leucocyte-depleting blood cardioplegia		without the filter			
52	Clinical evaluation of a new generation membrane oxygenator: a prospective randomized study.	Stammers AH, Fristoe LW, Alonso A, Song Z, Galbraith T.	Perfusion 1998 May;13(3):165-75 9638713	Spiral Gold	a new generation gollow -fibre memb rane oxygenator	coronary artery disease				Spiral Gold		Univox Gold			
53	Heparin-coated bypass circuits (Carmeda) suppress the release of tissue plasminogen activator during normothermic coronary artery bypass graft surgery.	Spies BD, Vocelka C, Cochran RP, Soltow L, Chandler WL	J Cardiothorac Vasc Anesth 1998 Jun;12(3):299-304 9636912	Carmeda	heparin coated circuits	coronary artery disease	primary CABG			heparin-coated circuits	centrifugal pump	non-coating			

情報 NO.	基本情報		技術基本能力										
	題名 サマリ-	治癒性	死亡率・生存率	再発率・予防率	その他の予後リスク	感受性(疾病) 即効性、適用性、種別性	影響性 健康性、疼痛性、併発性(各併発)、その他のリスク	機能回復性	病態維持性	健康改善性	予防系		
49	Heparin-coated bypass circuits: effects on inflammatory response in pediatric cardiac operations.	all clinical and inflammatory mediators showed a tendency in favor of the group with heparin-coated circuits. When analyzed on a point-by-point basis there were significant difference in postoperative central body temperature, soluble E-selectin levels, and beta-thromboglobulin levels (p<0.05)											
50	Superiority of centrifugal pump over roller pump in paediatric cardiac surgery: prospective randomised trial.	The centrifugal pump resulted in a lower plasma free haemoglobin (mean +/- SD, 50+/-23 vs 72+/-35mg/dl, P<0.01). Higher platelet count (133.1+/-34.8 vs 63.5+/-29.6x10 ⁹ /l, P<0.01), less platelet activation (beta-TG 1253+/-633 vs 1657+/-677ng/ml, P<0.05), less cytochrome release (IL-6 329+/-57 vs 392+/-59pg/ml, P<0.05), and reduced levels of C3a (4822+/-274 vs 5933+/-393 ng/ml, P<0.01). Difference were detected in favour of the centrifugal pump in urine output on bypass (4.0+/-0.5 vs 2.3+/-1.9ml/kg per h, P<0.01), postoperative maximal urea (6.5+/-3.1 vs 10.2+/-6.7mmol/l, P<0.02), ventilation time (18.9+/-6.5 vs 56.5+/-51.7h, P<0.01), duration of intensive care (1.4+/-0.79 vs 15.75+/-23.9days, P<0.01) and hospital stay (5.7+/-1.4 vs 15.75+/-23.9days, P<0.01), but not in blood and tissue plasminogen activator (TPA) activity and antigen increased fivefold in the placebo group during CPB, whereas it did not double in the heparin-coated group. Plasminogen activator inhibitor-1 (PAI-1), prothrombin complex F1.2, and antithrombin III (AT) were not different between groups											
51	Clinical evaluation of a leucocyte-depleting blood cardioplegia filter (BCFB) for elective open-heart surgery.	There were no significant differences between the two groups in terms of conditions of perfusion. No adverse effects were seen in either group. The total leucocyte reduction rate through the filter was 98.1% with the passage of 2 liters of blood through the filter. A pressure drop of 4.4 +/- 3.2 mmHg was observed through the filter during use.		Statistically significant difference were noted between the two groups in CPK-MB (p=0.031), and									
52	Clinical evaluation of a new generation membrane oxygenator: a prospective randomized study.	during CPB, the Spiral had a significantly lower pressure drop (26.9+/-8.2 vs 46.7+/-16.2 mmHg, P<0.001). The Spiral had significantly lower plasma free haemoglobin levels during all time periods of CPB. Heat exchange coefficients were higher during the rewarming period in the Spiral (0.59+/-0.28 vs 0.36+/-0.19, p=0.06). There were no differences in oxygen transfer between groups, but ventilation gas sweep rates and FIO2 levels were statistically lower in the Spiral at the two of three sampling time periods. The ratio of tissue plasminogen activator (TPA) activity and antigen increased fivefold in the placebo group during CPB, whereas it did not double in the heparin-coated group. Plasminogen activator inhibitor-1 (PAI-1), prothrombin complex F1.2, and antithrombin III (AT) were not different between groups											
53	Heparin-coated bypass circuits (Carmeds) suppress the release of tissue plasminogen activator during normothermic coronary artery bypass graft surgery.												

情報 NO.	基本情報	技術補充能力										技術付帯能力				
		親和性(適合技術)		信頼性・安全性			運用性					患者QOL系				
		他技術との 融合性	相乗効果の 程度	故障率	安全性	アウトカムの 安定性 結果の均一性・ 再現性	その他のリスク ヘッジ能力	操作性	安定性	可搬性	管理性・ 保管性	規格・基準 適用性	人材育成・ト レーニングの 簡便性	生物レベルのQOL (個への対応、身体的影響性、精神 的影響性、生体への影響)	生活レベルの QOL (個への対応、 生活行動能力への 影響、その他)	
49	Heparin-coated bypass circuits: effects on inflammatory response in paediatric cardiac operations.															
50	Superiority of centrifugal pump over roller pump in paediatric cardiac surgery. prospective randomised trial.															Difference were detected in favour of the centrifugal pump in duration of intensive care (1.4+/-0.79 vs 15.75+/-23.9days P<0.01) and hospital stay(5.7+/-1.4 vs 15.75+/-23.9days P<0.01)
51	Clinical evaluation of a leucocyte-depleting blood cardioplegia filter (BC1B) for elective open-heart surgery.															
52	Clinical evaluation of a new generation membrane oxygenator: a prospective randomized study.															
53	Heparin-coated bypass circuits (Carmeda) suppress the release of tissue plasminogen activator during normothermic coronary artery bypass graft surgery.															

情報 NO.	基本情報			技術満足情報1				技術満足情報2			その他	
	題名 サマリー	その他のQOL (技術能力の発 明・理解度、治療 効果の体感・確認 性、患者満足の影響、 等、その他)	家族(社会)のQOL	機器コスト系	運用コスト系	必要リソース	医療経済学的 分析系	技術評価 系	調査条件	その他		
49	Heparin-coated bypass circuits: effects on inflammatory response in paediatric cardiac operations.		生物レベルの QOL 生活レベルの QOL その他の QOL	機器本体コスト、 周辺機器コスト、 その他設備コスト	労務費、材料費、 検査費、その他費用	施設、設備費、 薬、検体、ス タッフ費、消耗 品数量、その他	公的保険上、 自由保険上、 その他	調査条件	heparin-coated n=9, uncoated n=10	経典自身に関するコメント the data suggest that the use of heparin coated CPB offers clinical benefit and tends to reduce the release of inflammatory mediators	その他	
50	Superiority of centrifugal pump over roller pump in paediatric cardiac surgery: prospective randomised trial.								42 children, 21 each	the results strongly favour the use of centrifugal pump in routine paediatric cardiac surgery		
51	Clinical evaluation of a leucocyte-depleting blood cardioplegia filter (BCIB) for elective open-heart surgery.								20 adult patients in each group	the Pall BCIB leucocyte-depleting filter for blood cardioplegia has been shown to be effective in alleviating reperfusion injury in open-heart surgery patients		
52	Clinical evaluation of a new generation membrane oxygenator: a prospective randomized study.								13 patients in each group	the Spiral Gold oxygenator had superior oxygen transfer efficiency and lower haemolysis rates than the Univox Gold oxygenator		
53	Heparin-coated bypass circuits (Carneda) suppress the release of tissue plasminogen activator during normothermic coronary artery bypass graft surgery.								heparin-coated n=11, placebo; n=10	heparin-coated CPB circuits reduced TPA release in this homogeneous CABG population with routine heparin/prothamine management		