**Supplemental table 1. Characteristics of the included trials (in more detail).**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Studies** | | | **Participants** | | | | **Interventions** | | | | | |
| **First author** | **year** | **Location of study** | **Type of Surgery** | **Sample (PANH/Control)** | **Age (Mean)** | **Male (%)** | **Baseline Hct or Hb** | **Target Hct (%) or (Hb)** | **Average volume of blood withdrawn** | | **Fluid to replace the withdraw blood** | |
|
| Bennett et al. | 1994 | Sweden | Total hip prosthesis replacement | 20/20 | 64.0 | - | 42% | 25% | 900 ml | | Gelatin | |
| Bennett et al. | 2006 | UK | Hip surgery | 78/77 | 66.0 | 47.1 | ≥12 g/dL | 11.0 g/dL | 420 ml | | Crystalloids | |
| Beveniste et al. | 1978 | Denmark | Abdominal hysterectomy surgery | 39/44 | 45.1 | - | 32.4% or 8.64 g/dL | - | 600-700 ml | | Lactated Ringer's | |
| Boldt et al. | 1991 | Germany | Aortocoronary bypass grafting surgery | 15/15 | - | - | 13.6 g/dL | 11.4 g/dL | 890 ml | | 6% HES | |
| Bonnet et al.a | 1986 | France | Repair craniofacial disjunction surgery | 10/10 | 31.3 | - | 43.50% | 29% | 1015 ml | | Colloid | |
| Bonnet et al.b | 1986 | France | Excision of squamous carcinomas of the mouth surgery | 10/10 | 58.0 | - | 40% | 30% | 870 ml | | Colloid | |
| Boussofara et al. | 2002 | Switzerland | Cervico-facial oncologic surgery | 17/21 | 64.8 | 100.0 | 41% or 13.4 g/dL | 33.6% or 10.8 g/dL | 341-496 ml | | Colloid | |
| Casati et al. | 2002 | Italy | Open heart surgery | 102/100 | 63.0 | 53.0 | 41.8% or 13.8 g/dL | - | 360–576 ml | | Colloid | |
| Casati et al. | 2004 | Italy | Off-pump coronary artery bypass surgery | 50/50 | 64.0 | 85.0 | 41.2% or 13.8 g/dL | - | 850 ml | | 4% Succinylated gelatin | |
| Catoire et al. | 1992 | France | Abdominal aortic surgery | 10/10 | 66.7 | 100.0 | 40% | 30% | 875 ml | | Dextran 60,000 | |
| Chen et al. | 2007 | China | Radical resection for stomach cancer surgery | 30/30 | 50.3 | 55.0 | > 33% or 11.0 g/dL | - | 400 ml | | Plasma substitute | |
| Daif et al. | 2012 | Egypt | Brain tumor resection surgery | 20/20 | 20-60 | 50.0 | 39.4% or 13.25 g/dL | 33.7% or 11.7 g/dL | 900-1000 ml | | 6% HES | |
| Durmus et al. | 2003 | Turkey | Coronary artery bypass grafting surgery | 20/20 | 57.4 | 72.5 | 42% | 33.60% | 612.5 ml | | 6% HES | |
| Dietrich et al. | 1989 | Germany | Coronary artery bypass grafting surgery | 25/25 | 55.0 | 100.0 | 42% | 30% | 731 ml | | HES | |
| EI-Dessouky et al. | 2011 | Egypt | Spinal fusion surgery | 20/20 | 39.1 | 82.5 | 38.8% or 13.2 g/dL | 33.3% or 11.9 g/dL | 900 ml | | 6% HES | |
| Ela et al. | 2009 | Turkey | Off-pump coronary artery bypass surgery | 28/29 | 63.1 | 80.7 | 45.2% or 14.9 g/dL | 28% | - | | HES | |
| Ervena et al. | 2010 | Germany | Orthognathic surgery | 20/21 | 25.4 | 34.1 | 13.5 g/dL | 9 g/dL | 900 ml | | 6% HES | |
| **Interventions** | | | | | **Outcomes** | | | **Jadad Scale** | | | | |
| **Other active intervention**  **in both groups** | | **Transfusion protocal** | **Trigger Hb or Hct** | | **Extractable Outcomes**  **(1.No. exposed to allogeneic blood 2.Units of Allogeneic Blood 3.Volume of Blood Loss 4.Adverse Events)** | | | **Randomization** | **Blind** | **Withdrawals and**  **Dropouts Described (n)** | | **Jadad Score** |
| Intraoperative | Postoperative |
| None | | Yes | 8 g/dL | 8 g/dL | 1 | | | 1 | 0 | 1(0) | | 2 |
| None | | Yes | 25% | 30% | 1,4 | | | 2 | 0 | 1(0) | | 3 |
| None | | No | - | - | 3,4 | | | 1 | 0 | 1(0) | | 2 |
| None | | Yes | 7 g/dL | - | 1,3,4 | | | 2 | 0 | 1(0) | | 3 |
| None | | Yes | 28% | 30% | 1,2,3,4 | | | 1 | 0 | 1(0) | | 2 |
| None | | Yes | 28% | 30% | 1,2,3,4 | | | 1 | 0 | 1(0) | | 2 |
| Iron and folic acid | | Yes | 10 g/dL | 10 g/dL | 1,3,4 | | | 1 | 0 | 1(0) | | 2 |
| Tranexamic acid and cell salvage | | Yes | 6.5 g/dL or 20% | 8.5 g/dL or 25% | 1,4 | | | 2 | 0 | 1(2) | | 3 |
| Tranexamic acid and cell salvage | | Yes | 8 g/dLor 24% | 8 g/dL or 24% | 1,4 | | | 2 | 0 | 1(0) | | 3 |
| None | | No | - | - | 2,3,4 | | | 1 | 0 | 1(0) | | 2 |
| None | | No | - | - | 3 | | | 1 | 0 | 1(0) | | 2 |
| None | | Yes | 10 g/dL | - | 1,3 | | | 2 | 0 | 1(0) | | 3 |
| None | | Yes | 29(18)%\* | - | 2 | | | 1 | 0 | 1(0) | | 2 |
| None | | Yes | - | - | 1,2,4 | | | 1 | 0 | 1(0) | | 2 |
| None | | Yes | 9 g/dL or 25% | - | 3 | | | 2 | 0 | 1(0) | | 3 |
| None | | Yes | 8 g/dL or 25% | 8 g/dL or 25% | 1,2,3,4 | | | 2 | 0 | 1(3) | | 3 |
| Induced hypotension | | Yes | 6.5 g/dL | 7 g/dL | 1,2 | | | 1 | 0 | 1(0) | | 2 |

**Table 1 (Continued)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Studies** | | | | **Participants** | | | | | | | **Interventions** | | | | | | | |
| **First author** | **year** | **Location of study** | | **Type of Surgery** | | | **Sample (PANH/Control)** | | **Age (Mean)** | **Male (%)** | **Baseline Hct or Hb** | **Target Hct (%) or (Hb)** | | **Average volume of blood withdrawn** | | | **Fluid to replace the withdraw blood** | |
|
| Fayed et al. | 2013 | Egypt | | Liver resection surgery | | | 80/80 | | 49.3 | 78.1 | 41% | 27% | | 1750 ml | | | 6% HES | |
| Fischer et al. | 2010 | USA | | Pancreaticoduodenectomy surgery | | | 65/65 | | 64.5 | 53.1 | 13.2 g/dL | 7.9 g/dL | | 2250 ml | | | 5% Albumin and crystalloid | |
| Gombotz et al. | 2000 | Austria | | Hip replacement surgery | | | 20/20 | | 57.5 | 0.0 | 11.0 g/dL | 8 g/dL | | 1440 ml | | | 6% HES and Ringer’s lactate | |
| Guo et al. | 2010 | China | | Hepatic carcinectomy surgery | | | 15/15 | | 65.0 | 73.3 | >35% | 28% | | - | | | 6% HES | |
| Hallowell et al. | 1972 | USA | | Cardiac surgery | | | 25/25 | | - | - | 38% | - | | 1252 ml | | | Ringer’s/5% albumin/5% PPF or blood | |
| Hans et al. | 2000 | Belgium | | Repair craniosynostosis surgery | | | 17/17 | | 0.6 | 70.6 | 33.20% | 25% | | 122 ml | | | 5% Albumin | |
| Hensel et al. | 1996 | Germany | | Gastric surgery | | | 30/20 | | 49.2 | 58.0 | 40.50% | 35% | | 672 ml | | | 6% HES | |
| Herregods et al. | 1995 | Belgium | | Coronary artery bypass grafting surgery | | | 15/15 | | 61.9 | 90.0 | 39.70% | 34.80% | | 785 ml | | | Succiny-linked gelatin | |
| Herregods et al. | 1997 | Belgium | | Coronary artery bypass grafting surgery | | | 39/32 | | 61.9 | 93.0 | 39.60% | 35% | | 750 ml | | | Succiny-linked gelatin | |
| Hohn et al. | 2002 | Switzerland | | Cardiac surgery | | | 36/41 | | 63.4 | 77.9 | 43.25% | 27.90% | | 1099 | | | HES | |
| Hurpe et al. | 1987 | France | | Cardiac surgery | | | 79/81 | | 56.0 | 71.9 | 37.30% | 36.90% | | 734.4 | | | Gelatin | |
| Jalali et al. | 2008 | Iran | | Coronary artery bypass grafting surgery | | | 50/50 | | 56.7 | 93.0 | 44.60% | 9 g/dL | | - | | | 0.9% saline | |
| Jarnagin et al. | 2008 | USA | | Hepatic resection surgery | | | 63/67 | | 53.5 | 53.1 | 13.25 g/dL | 8 g/dL | | 2250 ml | | | 5% albumin and crystalloid | |
| Juelsgaard et al. | 2002 | Denmark | | Total knee arthroplasty surgery | | | 14/14 | | 73.0 | 75.0 | 38.40% | 30.40% | | 877 ml | | | 6% HES | |
| Kahraman et al.a | 1997 | Turkey | | Coronary artery bypass grafting surgery | | | 14/7 | | 41-69 | 67.9 | 41.80% | - | | 369-590 ml | | | Crystalloid and 3.5% polygeline | |
| Kahraman et al.b | 1997 | Turkey | | Coronary artery bypass grafting surgery | | | 14/7 | | 45-70 | 67.9 | 41.80% | - | | 743-1114.5 ml | | | Crystalloid and 3.5% polygeline | |
| Karakaya et al. | 1999 | Turkey | | Primary total hip arthroplasty surgery | | | 10/10 | | 62.7 | 50.0 | 35.75% or 11.95 g/dL | 29.3% or 9.8 g/dL | | 1000 ml | | | 6% HES | |
| Khanna et al. | 1998 | India | | Major general surgical | | | 20/20 | | - | - | - | 9.19 g/dL | | 836.6 ml | | | 3% Polygeline | |
| Licker et al. | 2005 | Switzerland | | Coronary artery bypass grafting surgery | | | 41/39 | | 66.0 | 82.5 | 40.50% | 28% | | - | | | 6% HES | |
| Licker et al. | 2007 | Switzerland | | Aortic valve replacement | | | 19/21 | | 66.4 | 70.0 | 14.4 g/dL | 9 g/dL | | - | | | 6% HES | |
| **Interventions** | | | | | | | | **Outcomes** | | | | | **Jadad Scale** | | | | | |
| **Other active intervention**  **in both groups** | | | **Transfusion protocal** | | **Trigger Hb or Hct** | | | **Extractable Outcomes**  **(1.No. exposed to allogeneic blood 2.Units of Allogeneic Blood 3.Volume of Blood Loss 4.Adverse Events)** | | | | | **Randomization** | | **Blind** | **Withdrawals and**  **Dropouts Described (n)** | | **Jadad Score** |
| Intraoperative | Postoperative | |
| None | | | Yes | | 24% | 24% | | 1,2,4 | | | | | 1 | | 0 | 1(0) | | 2 |
| None | | | Yes | | 7 g/dL | 8 g/dL | | 1,4 | | | | | 1 | | 0 | 1(0) | | 2 |
| rHuEPO and iron | | | Yes | | 8 g/dL | 8 g/dL | | 1,2,3,4 | | | | | 1 | | 0 | 1(0) | | 2 |
| None | | | Yes | | 8 g/dL or 25% | - | | 2,3 | | | | | 1 | | 0 | 1(0) | | 2 |
| None | | | No | | - | - | | 1 | | | | | 1 | | 0 | 1(0) | | 2 |
| None | | | Yes | | 21% | 21% | | 1,2 | | | | | 1 | | 0 | 1(0) | | 2 |
| None | | | Yes | | 30% | 30% | | 1,4 | | | | | 1 | | 0 | 1(0) | | 2 |
| None | | | No | | - | - | | 1,4 | | | | | 1 | | 0 | 1(0) | | 2 |
| None | | | No | | - | - | | 1,2,3,4 | | | | | 2 | | 0 | 1(0) | | 3 |
| Aprotinin and cell salvage | | | Yes | | 25(17)% | - | | 1,3,4 | | | | | 2 | | 0 | 1(3) | | 3 |
| None | | | No | | - | - | | 2,3,4 | | | | | 1 | | 0 | 1(0) | | 2 |
| None | | | Yes | | 8 g/dL | 8 g/dL | | 1,2,3 | | | | | 2 | | 0 | 1(0) | | 3 |
| None | | | Yes | | 7 g/dL | 8 g/dL | | 1,2,4 | | | | | 2 | | 0 | 1(0) | | 3 |
| Controlled hypotension | | | Yes | | 28% | 28% | | 1,2,3,4 | | | | | 2 | | 0 | 1(5) | | 3 |
| None | | | Yes | | - | 30% | | 1,2,3,4 | | | | | 1 | | 0 | 1(0) | | 2 |
| None | | | Yes | | - | 30% | | 1,2,3,4 | | | | | 1 | | 0 | 1(0) | | 2 |
| None | | | Yes | | 25% | 30% | | 2 | | | | | 1 | | 0 | 1(0) | | 2 |
| None | | | Yes | | - | - | | 1,2 | | | | | 1 | | 0 | 1(0) | | 2 |
| Aprotinin and cell salvage | | | Yes | | 25(18)% | - | | 1,2,3,4 | | | | | 2 | | 0 | 1(4) | | 3 |
| Aprotinin and cell salvage | | | Yes | | 25(18)% | - | | 1,2,3,4 | | | | | 2 | | 0 | 1(3) | | 3 |

**Table 1 (Continued)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Studies** | | | | **Participants** | | | | | | | **Interventions** | | | | | | | |
| **First author** | **year** | **Location of study** | | **Type of Surgery** | | | **Sample (PANH/Control)** | | **Age (Mean)** | **Male (%)** | **Baseline Hct or Hb** | **Target Hct (%) or (Hb)** | | **Average volume of blood withdrawn** | | | **Fluid to replace the withdraw blood** | |
|
| Lim et al. | 2003 | Korea | | Spinal surgery | | | 15/15 | | 49.0 | 56.7 | 40% | 28% | | 717 ml | | | 6% HES and Ringer’s  lactate | |
| Lisander et al.a | 1996 | Sweden | | Idiopathic scoliosis | | | 10/13 | | 14.4 | 17.4 | 13.65 g/dL | 8 g/dL | | 1125 ml | | | 6% dextran 70 or 3%  dextran or 4% albumin | |
| Lisander et al.b | 1996 | Sweden | | Idiopathic scoliosis | | | 13/11 | | 14.5 | 16.7 | 14.1 g/dL | 8 g/dL | | 1215 ml | | | 6% dextran 70 or 3% dextran or 4% albumin | |
| Lorentz et al. | 1991 | Germany | | Total hip arthroplasty surgery | | | 16/15 | | - | - | - | 9 g/dL | | 700 ml | | | Polygeline | |
| Mahoori et al. | 2009 | Iran | | Coronary artery bypass grafting surgery | | | 54/47 | | 56.4 | 85.1 | 39.5% or 13.45 g/dL | - | | 490 ml | | | Gelatin | |
| Matot et al. | 2002 | Israel | | Major liver resections surgery | | | 39/39 | | 56.5 | 39.7 | 41.20% | 23.50% | | 2020 ml | | | 6% dextran and 5% albumin | |
| McGill et al. | 2002 | USA | | Cardiac surgery | | | 84/84 | | 84.4 | 88.7 | >36% or 12 g/dL | - | | 843 ml | | | Gelatin | |
| Moyes et al. | 1985 | South Africa | | Thoracic surgery | | | 10/10 | | 39.0 | 85.0 | - | 28.20% | | 500 ml | | | Dextran 70 | |
| Nuttall et al. | 2000 | USA | | Coronary artery bypass grafting or/and cardiac valve surgery | | | 32/45 | | 69.5 | 76.6 | - | - | | 859 ml | | | - | |
| Naqash et al. | 2011 | India | | Intracranial meningioma surgery | | | 20/20 | | 45.1 | 45.0 | 12.98 g/dL | 10.44 g/dL | | 802 ml | | | 6% HES | |
| Oishi et al. | 1997 | USA | | Primary total hip arthroplasty surgery | | | 16/16 | | 62.5 | 57.6 | 37.50% | 28.80% | | - | | | Crystalloids and/or colloids | |
| Olsfanger et al.a | 1997 | Israel | | Total knee replacement surgery | | | 10/5 | | 71.5 | 20.0 | - | 28%-30% | | 1003 ml | | | Lactated Ringer's | |
| Olsfanger et al.b | 1997 | Israel | | Total knee replacement surgery | | | 10/5 | | 68.5 | 15.0 | - | 28%-30% | | 985 ml | | | Lactated Ringer's | |
| Payen et al. | 1997 | France | | Maxillofacial surgery | | | 13/13 | | 25.5 | 57.7 | 37.50% | 30% | | 862.5 ml | | | 4% Albumin | |
| Peillon et al. | 1995 | France | | Mandibular osteotomy surgery | | | 16/16 | | 25.0 | 65.6 | 41.80% | 30% | | 828 ml | | | 4% Albumin | |
| Saricaoglu et al. | 2005 | Turkey | | Hip arthroplasty surgery | | | 10/10 | | 59.0 | 80.0 | 41.20% | 32.50% | | 1065 ml | | | 6% HES | |
| Sanders et al. | 2004 | UK | | Major gastrointestinal surgery | | | 78/82 | | 62.3 | 52.5 | 13.5 g/dL | 8 g/dL | | - | | | Gelofusine and Lactated Ringer's | |
| Soltanzadeh et al. | 2012 | Iran | | Coronary artery bypass grafting surgery | | | 50/50 | | < 70 | 100.0 | > 12 g/dL | - | | 500 ml | | | Lactated Ringer's | |
| Triulzi et al. | 1995 | Zimbabwe | | Cardiac surgery | | | 18/28 | | 60.4 | 82.6 | 14.1 g/dL | 10.6 g/dL | | 924 ml | | | Colloid and/or crystalloid | |
| Van der Linden et al. | 1994 | Belgium | | Total hip replacement surgery | | | 10/10 | | 59.5 | 45.0 | 42.20% | 28.20% | | 880 ml | | | 6% HES or/and 4.5% albumin | |
| Vedrinne et al. | 1992 | France | | Cardiac surgery | | | 30/30 | | 58.0 | 73.3 | 14.16 g/dL | 11.61 g/dL | | 400 ml | | | 4% Albumin | |
| **Other active intervention**  **in both groups** | | | **Transfusion protocal** | | **Trigger Hb or Hct** | | | **Extractable Outcomes**  **(1.No. exposed to allogeneic blood 2.Units of Allogeneic Blood 3.Volume of Blood Loss 4.Adverse Events)** | | | | | **Randomization** | | **Blind** | **Withdrawals and**  **Dropouts Described (n)** | | **Jadad Score** |
| **Intraoperative** | **Postoperative** | |
| Controlled hypotension | | | Yes | | 20% | - | | 1,2,3,4 | | | | | 1 | | 0 | 1(0) | | 2 |
| None | | | Yes | | 8 g/dL | 8 g/dL | | 2,3,4 | | | | | 1 | | 0 | 1(0) | | 2 |
| Cell salvage | | | Yes | | 8 g/dL | 8 g/dL | | 2,3,4 | | | | | 1 | | 0 | 1(0) | | 2 |
| None | | | Yes | | - | - | | 1 | | | | | 1 | | 0 | 1(0) | | 2 |
| None | | | Yes | | 10g/dL or 30% | - | | 1,2,3,4 | | | | | 2 | | 0 | 1(0) | | 3 |
| None | | | Yes | | 20% | - | | 1,2,3,4 | | | | | 2 | | 0 | 1(0) | | 3 |
| Cell salvage | | | Yes | | 20(20)% | 9 g/dL or 27% | | 2,3,4 | | | | | 2 | | 0 | 1(0) | | 3 |
| None | | | No | | - | - | | 2,3,4 | | | | | 1 | | 0 | 1(0) | | 2 |
| Tranexamic acid and cell salvage and reinfusion of shed mediastinal blood | | | Yes | | 8(7) g/dL | - | | 1 | | | | | 2 | | 1 | 1(8) | | 4 |
| None | | | Yes | | - | - | | 2,3,4 | | | | | 1 | | 0 | 1(0) | | 2 |
| PAD and cell salvage | | | No | | - | - | | 1 | | | | | 2 | | 0 | 1(1) | | 3 |
| None | | | Yes | | - | 28% | | 1,2,3,4 | | | | | 2 | | 0 | 1(0) | | 3 |
| None | | | Yes | | - | 28% | | 1,2,3,4 | | | | | 2 | | 0 | 1(0) | | 3 |
| None | | | No | | - | - | | 3 | | | | | 1 | | 0 | 1(0) | | 2 |
| None | | | Yes | | 25% | - | | 1 | | | | | 1 | | 0 | 1(0) | | 2 |
| None | | | Yes | | 9 g/dL | - | | 1,2,3 | | | | | 1 | | 0 | 1(0) | | 2 |
| None | | | Yes | | 8 g/dL | 8 g/dL | | 1,4 | | | | | 1 | | 0 | 1(0) | | 2 |
| None | | | No | | - | - | | 2 | | | | | 1 | | 0 | 1(0) | | 2 |
| None | | | Yes | | 20% | 24% | | 1,2,3,4 | | | | | 2 | | 0 | 1(0) | | 3 |
| None | | | Yes | | 30% | 30% | | 2,3,4 | | | | | 1 | | 0 | 1(0) | | 2 |
| None | | | Yes | | 27(24) | 30% | | 1,2,3,4 | | | | | 1 | | 0 | 1(0) | | 2 |

**Table 1 (Continued)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Studies** | | | | **Participants** | | | | | | | **Interventions** | | | | | | | |
| **First author** | **year** | **Location of study** | | **Type of Surgery** | | | **Sample (PANH/Control)** | | **Age (Mean)** | **Male (%)** | **Baseline Hct or Hb** | **Target Hct (%) or (Hb)** | | **Average volume of blood withdrawn** | | | **Fluid to replace the withdraw blood** | |
|
| Virmani et al. | 2010 | India | | Valve surgery | | | 88/100 | | 31.0 | 49.5 | 12.25 g/dL | - | | 270.8 | | | HES | |
| Welch et al. | 1993 | UK | | Infrarenal aortic surgery | | | 20/19 | | 60.1 | 59.0 | 40.20% | 28% | | 1500 ml | | | Dextran 70 or/and plasma | |
| Wolowczyk et al. | 2003 | UK | | Abdominal aortic aneurysm repair surgery | | | 16/18 | | 74.1 | 67.6 | 14.0 g/dL | 9.4 g/dL | | 890 ml | | | 6% HES | |
| Yao et al. | 2006 | China | | Liver tumorectomy surgery | | | 10/10 | | 28-65 | 53.0 | 41% or 13.62 g/dL | 34.7% or 11.42 g/dL | | 705 ml | | | 6% HES | |
| Zisman et al. | 2009 | Israel | | Cardiac surgery | | | 27/35 | | 59.7 | 87.1 | 14.3 g/dL | - | | 600 ml | | | 6% HES | |
| **Interventions** | | | | | | | | **Outcomes** | | | | | **Jadad Scale** | | | | | |
| **Other active intervention**  **in both groups** | | | **Transfusion protocal** | | **Trigger Hb or Hct** | | | **Extractable Outcomes**  **(1.No. exposed to allogeneic blood 2.Units of Allogeneic Blood 3.Volume of Blood Loss 4.Adverse Events)** | | | | | **Randomization** | | **Blind** | **Withdrawals and**  **Dropouts Described (n)** | | **Jadad Score** |
| **Intraoperative** | **Postoperative** | |
| None | | | Yes | | 8(6) g/dL | - | | 1,2,3,4 | | | | | 2 | | 0 | 1(0) | | 3 |
| None | | | No | | - | - | | 2,3,4 | | | | | 1 | | 0 | 1(0) | | 2 |
| Cell salvage | | | Yes | | 8 g/dL | 9.5 g/dL | | 1 | | | | | 2 | | 0 | 1(2) | | 3 |
| None | | | Yes | | - | - | | 1,2,3,4 | | | | | 1 | | 0 | 1(0) | | 2 |
| None | | | Yes | | - | 9 g/dL | | 1,3,4 | | | | | 1 | | 0 | 1(6) | | 2 |

**\***Criteria for intraoperative allogeneic transfusions: number in brackets means during cardiopulmonary bypass; number out of brackets means after cardiopulmonary bypass.

PANH, Preoperative acute normovolemic hemodilution; Hct, Red blood cell specific volume; Hb, Hemoglobin; HES, Hydroxyethyl starch; rHu-EPO, Recombinant human erythropoietin; PPF, Plasma protein fraction; PAD, Preoperative autologous donation.