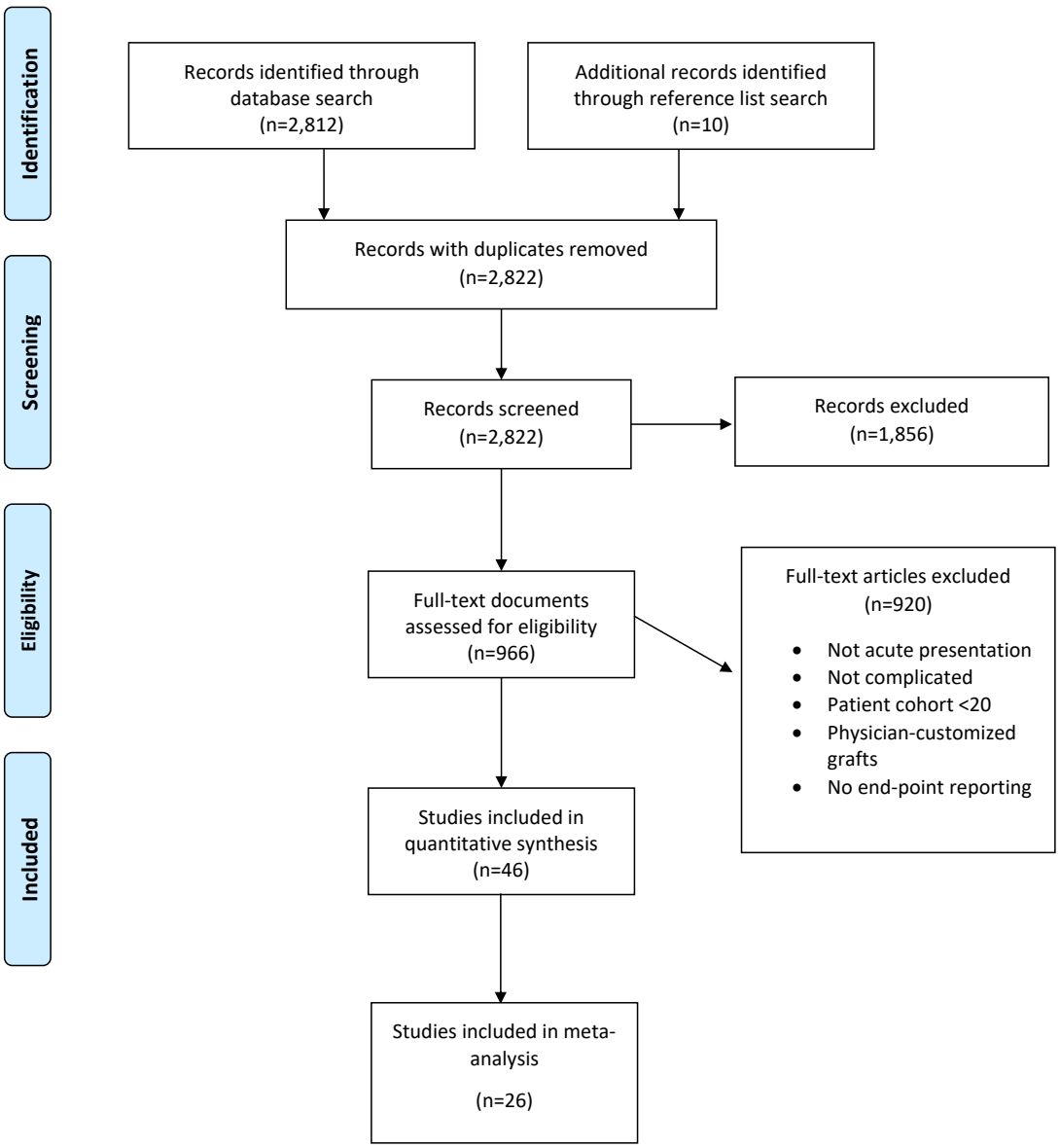


**Figure S1** PRISMA search strategy.


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**Table S1** Delphi quality assessment tool

| Criteria No. | Criterion definition |
|---|---|
| 1 | Is the hypothesis/aim/objective of the study stated in the abstract, introduction, or methods section? |
| 2 | Are the characteristics of the patients included in the study clearly described? |
| 3 | Were the cases collected in more than one center? |
| 4 | Are the eligibility criteria (inclusion and exclusion criteria) explicit and appropriate? |
| 5 | Were patients recruited consecutively? |
| 6 | Did patients enter the study at a similar point in the disease? |
| 7 | Did the authors describe the intervention? |
| 8 | In addition to intervention, did the patients receive any co-interventions? |
| 9 | Was loss to follow-up reported? |
| 10 | Are outcomes (primary, secondary) clearly defined in the introduction or methodology section? |
| 11 | Did the authors use accurate (standard, valid, reliable) objective methods to measure the outcomes? |
| 12 | Were outcomes assessed before and after intervention? |
| 13 | Was the length of follow-up clearly described/reported? |
| 14 | Were the statistical tests used to assess the primary outcomes appropriate? |
| 15 | Does the study provide estimates of the random variability in the data for the primary outcomes (e.g., standard error, standard deviation, confidence intervals)? |
| 16 | Was the analysis of outcomes based on intention to treat? |
| 17 | Are adverse events that may be a consequence of the intervention reported? |
| 18 | Are the conclusions of the study supported by results? |
| 19 | Is there a competing interest statement about the type and source of support received for the study or about the relationship of the author(s) or other contributors with the manufacturer of the technology? |


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**Table S2** Study details and quality findings

| Author (year) | Cohort size (n) | Males (n) | Age (mean), years | Study quality (Delphi) | Country | Hospital | Years of patient enrollment | Graft type | Primary technical success (%) | 30-day mortality |
|---|---|---|---|---|---|---|---|---|---|---|
| Schoder (2007) | 24 | 23 | 57 | H | Austria | Medical University of Vienna | 2000–2005 | Talent | 100% | 10.7% |
| Sayer (2008) | 38 | 26 | 62.5 | M | United Kingdom | St. George's Hospital | 2000–2007 | Valiant, Talent, Zenith, Excluder | NR | 2.6% |
| Szeto (2008) | 35 | 22 | 58.6 | H | United States | Hospital of University of Pennsylvania | 2004–2007 | TAG, Zenith, Medtronic | 97.1% | 2.8% |
| Alves (2009) | 73 | 56 | 56.4 | M | Brazil | Hospital São Paulo–UNIFESP and Hospital do Coração da Associação do Sanatório Sírio | 1997–2004 | NR | 99% | 6.6% |
| Conrad (2009) | 33 | 26 | 58 | H | United States | Massachusetts General Hospital | 2005–2007 | TAG | NR | 12% |
| Feezor (2009) | 33 | 25 | 61 | L | United States | UF Health Shands Hospital | 2005–2007 | TAG | NR | 21% |
| Guangqi (2009) | 72 | 65 | 72 | H | China | The First Affiliated Hospital of Sun Yat-sen University | 2001–2006 | Talent, Zenith, Ankura, Aegis | 88.9% | 1.4% |
| Manning (2009) | 45 | 35 | 66 | H | Sweden | Malmo¨University Hospital UMAS | 2001–2008 | Zenith, TAG, Endofit, Relay | NR | 12% |
| Patel (2009) | 69 | 54 | 57.3 | M | United States | University of Michigan Hospital | 1997–2008 | NR | 95.7% | 17.4% |
| Chemelli-Steingruber (2010) | 38 | 29 | 64 | M | Austria | University Hospital Innsbruck | 1996–2008 | Talent, Excluder, TAG | NR | 23.7% |
| Ehrlich (2010) | 32 | 25 | 56 | M | Austria | Hospital Rudofstiftung | 2001–2010 | Talent | 87% | 12% |
| Zeeshan (2010) | 45 | 32 | 59.1 | M | United States | University of Pennsylvania Medical Center | 2002–2010 | TAG, Talent, Zenith | NR | 4% |
| Jing-Dong (2011) | 30 | 23 | 64 | M | China | TongJi Hospital | 2007–2008 | NR | 100% | 6.7% |
| Kim (2011) | 41 | 31 | 67.6 | H | United States | Harbor UCLA Medical Center | 2002–2009 | Talent, Valiant | 92.5% | 4.9% |
| Sfyroeras (2011) | 23 | 20 | 60.9 | H | United States | Arizona Heart Hospital | 1998–2009 | TAG, Talent, Endofit | 91% | 9% |
| Steuer (2011) | 60 | 40 | 68 | H | Sweden | Uppsala University | 1999–2009 | TAG, Relay | NR | 3% |
| Ehrlich (2013) | 29 | 22 | 61 | H | Germany | University Hospital Vienna | 1998–2004 | Talent | 100% | 17% |

**Table S2** (*continued*)


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**Table S2** (*continued*)

| Author (year) | Cohort size (n) | Males (n) | Age (mean), years | Study quality (Delphi) | Country | Hospital | Years of patient enrollment | Graft type | Primary technical success (%) | 30-day mortality |
|---|---|---|---|---|---|---|---|---|---|---|
| Eriksson (2013) | 51 | 18 | 63.8 | H | Sweden | Uppsala University Hospital | 1999–2009 | TAG, Talent, Valiant, TAG/Relay composite | 100% | NR |
| Liu (2013) | 33 | 27 | 47 | M | China | First and Second Affiliated Hospital of Harbin Medical University | 2009–2011 | NR | 100% | 0% |
| Qin (2013) | 152 | 137 | 63.61 | H | United States | Mie University Hospital | 1997–2017 | NR | 94.7% | 2% |
| Wilkinson (2013) | 49 | 28 | 70.1 | M | United States | University of Michigan Cardiovascular Center | 1995–2012 | TAG, Talent, Valiant, Zenith | 100% | 12% |
| Xiong (2013) | 26 | 3 | 52.8 | H | China | Chines PLA General Hospital | 2004–2010 | Talent, Valiant, Zenith, Endofit, Hercules, Ankura | 100% | 15% |
| Hanna (2014) | 50 | 36 | 59 | M | United States | Duke University Medical Venter | 2005–2012 | TAG, Zenith, Talent, Valiant | 98% | NR |
| Afifi (2015) | 37 | 25 | 61.3 | L | United States | Memorial Hermann Hospital | 2001–2014 | NR | NR | 7.6% |
| Bavaria (2015) | 50 | 40 | 57.2 | H | United States | The Heart Hospital | 2010–2012 | Valiant | 100% | 8% |
| Conrad (2015) | 31 | 23 | 55 | H | United States | Massachusetts General hospital | 2005–2009 | NR | NR | NR |
| He (2015) | 113 | 92 | 43 | H | China | The Third Xiangya Hospital of Central South University | 2010–2013 | Zenith, Relay, Talent, Hercules, Sinus-XL | 95.9% | 4.1% |
| Kische (2015) | 35 | 27 | 63 | M | Germany | Rostock University Medical Center | NR | Zenith, Valiant, Talent | NR | 2.8% |
| Arafat (2016) | 67 | 45 | 59.5 | H | United States | Cleveland Clinic | 2005–2013 | Zenith, TAG, Talent | 95.4% | 4.4% |
| Du (2016) | 264 | 201 | 58.3 | M | China | General Hospital of Shenyang Military Region | 2002–2013 | Talent, Valiant, Zenith | NR | 1% |
| Fanelli (2016) | 32 | 21 | 68 | H | Italy | University College Hospital Galway | 2009–2011 | TAG, Talent, Valiant, Zenith, Relay | 93.1% | 13.7% |
| Sobocinski (2016) | 45 | 35 | 58.6 | H | France | Lille University Hospital | 2007–2013 | Zenith | NR | 5.5% |
| Leshnower (2017) | 51 | 34 | 55 | H | United States | Emory Healthcare | 2012–2015 | Valiant, Zenith, TAG | NR | 3.9% |

**Table S2** (*continued*)


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**Table S2** (*continued*)

| Author (year) | Cohort size (n) | Males (n) | Age (mean), years | Study quality (Delphi) | Country | Hospital | Years of patient enrollment | Graft type | Primary technical success (%) | 30-day mortality |
|---|---|---|---|---|---|---|---|---|---|---|
| Piffaretti (2017) | 22 | 15 | 67 | H | Italy | Circolo University Teaching Hospital | 2001–2014 | NR | 91% | 14% |
| Zhang (2017) | 60 | 43 | 63.2 | H | China | General Hospital of People's Liberation Army | 2011–2013 | NR | 100% | 2.4% |
| Chou (2018) | 26 | 20 | 61 | M | Taiwan | National Taiwan University Hospital | 2008–2014 | TAG, Zenith, Talent, Valiant, Relay | 100% | 4% |
| Faure (2018) | 41 | 34 | 61 | H | France | Georges Pompidou European Hospital | 2011–2017 | Zenith | NR | 2% |
| Lou (2018) | 80 | 51 | 63.8 | M | United States | Emory University School of Medicine | 2000–2016 | NR | NR | 5% |
| Sobocinski (2019) | 41 | 32 | 60 | H | France | Skane University Hospital | 2005–2015 | Zenith, TAG | NR | 17.1% |
| Stelzmueller (2019) | 55 | 40 | 52 | M | Austria | Medical University of Vienna | 2001–2016 | NR | 91% | 9% |
| Zha (2019) | 63 | 52 | 59.1 | M | China | The First Affiliated Hospital of Anhui Medical University | 2012–2016 | Captiva, Zenith, Ankura, Grink | 100% | 4.3% |
| Zhou (2019) | 45 | 43 | 50 | M | China | Qingdao Municipal Hospital | 2012–2016 | NR | 100% | NR |
| Eleshra (2020) | 64 | 49 | 64.8 | M | Germany | University Hospital Hamburg-Eppendorf | 2010–2017 | Zenith | 97% | NR |
| Lou (2020) | 39 | 24 | 52.1 | H | United States | Emory University School of Medicine | 2012–2018 | Valiant, Medtronic, Zenith, TAG | 90% | 6% |
| Norton (2020) | 182 | 139 | 55 | H | United States | Michigan Medicine | 1996–2018 | NR | NR | 7.7% |
| Sobocinski (2020) | 41 | 32 | 58.8 | H | France | Institut Coeur-Poumon, Chu Lille and Skane University Hospital | 2005–2015 | NR | NR | 17.1% |

Age w/ standard deviation was reported as age (mean) for readability. Where age was reported as age (range), this was converted according to the methods of Wan et al. H, high; M, medium; L, low; NR, not reported.


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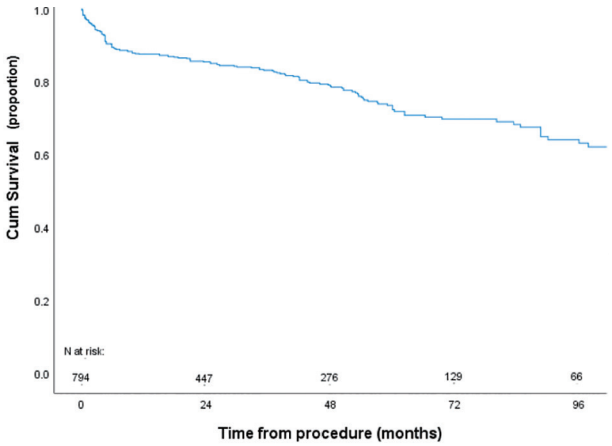


**Figure S2** Post-operative survival in AC-BAD in endovascular repair (high-quality subgroup analysis).

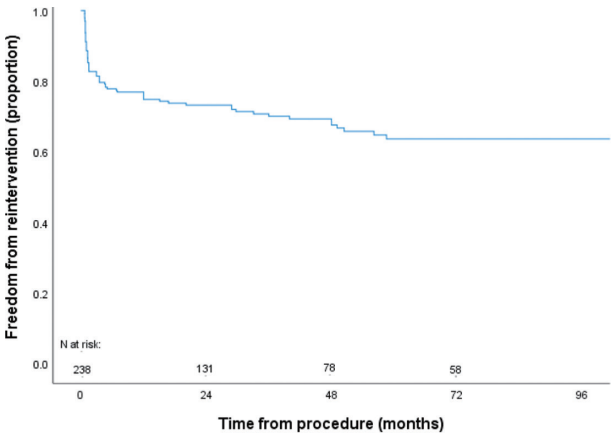


**Figure S3** Freedom from reintervention in AC-BAD (high-quality subgroup analysis).


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