Supplementary Table 1. Characteristics of the studies included (n=45)

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| --- | --- | --- | --- | --- | --- | --- | --- |
| **First author and year** | **Country** | **Study design** | **Sample size** | **Type of diagnostic modality** | **Gold standard comparator** | **Study participants** | **Criteria for positivity** |
| Aufwerber 199110 | Sweden | Retrospective | 542 | Semi-quantitative segment cultures | Qualitative catheter segment and  qualitative paired blood cultures | ICU patients | ≥15 colony forming units |
| Bjornson 198211 | United States of America | Prospective | 74 | Quantitative segment blood cultures | Qualitative catheter segment and  qualitative paired blood cultures | Patients receiving total parenteral nutrition | ≥1000 colony forming units |
| Bouza 200712 | Spain | Prospective | 204 | Semi-quantitative and quantitative segment blood cultures | Positive result of quantitative and/or conventional  blood cultures from a peripheral vein and semiquantitative  catheter-tip cultures positive for the same  microorganism | ICU patients | ≥15 colony forming units |
| Brun-Buisson 198713 | France | Prospective | 331 | Quantitative segment blood cultures | Qualitative catheter segment and  qualitative paired blood cultures | ICU patients | ≥1000 colony forming units |
| Capdevila 199214 | Spain | Prospective | 107 | IVD-drawn  quantitative  blood cultures and Paired quantitative blood cultures | Qualitative catheter segment and  qualitative paired blood cultures | ICU patients | >4:1 |
| Catton 200249 | United Kingdom | Prospective | 205 | IVD-drawn  quantitative  blood cultures | Qualitative catheter segment and  qualitative paired blood cultures | Surgical patients | >100 colony forming units |
| Catton 200515 | United Kingdom | Prospective | 123 | Quantitative segment  blood cultures | Qualitative catheter segment and  qualitative paired blood cultures | Surgical and ICU patients | >100 colony forming units |
| Cercenado 199016 | Spain | Prospective study | 139 | Semi-quantitative segment cultures | Qualitative catheter segment and  qualitative paired blood cultures | General inpatients | >15 colony forming units |
| Cleri 198017 | United States of America | Prospective study | 149 | Quantitative segment cultures | Qualitative catheter segment and  qualitative paired blood cultures | General inpatients | >1000 colony forming units |
| Collignon 198618 | Australia | Prospective | 745 | Semi-quantitative segment cultures | Qualitative catheter segment and  qualitative paired blood cultures | ICU patients | ≥15 colony forming units |
| Collignon 198719 | Australia | Prospective | 322 | Semi-quantitative segment cultures | Qualitative catheter segment and  qualitative paired blood cultures | Not reported | ≥15 colony forming units |
| Cooper and Hopkins 198520 | United States of America | Prospective | 330 | Semi-quantitative segment cultures | Qualitative catheter segment and  qualitative paired blood cultures | ICU patients | ≥15 colony forming units |
| Douard 199123 | France | Prospective | 53 | Paired quantitative blood cultures | Positive paired quantitative blood cultures | Children with  hematologic  or oncologic  illness | >5-fold |
| Douard 199421 | France | Prospective | 58 | Paired quantitative blood cultures | Positive paired quantitative blood and segment blood cultures | Medical and surgical ICU patients | >3:1 |
| Douard 199922 | France | Prospective | 170 | Paired and segmented quantitative blood cultures | Catheter drawn blood compared with  peripherally drawn blood | Immunocompromised patients | >4-fold |
| Evans 201624 | Australia | Prospective | 16 | Semi-quantitative segmented blood cultures | Quantitative or semi-quantitative of the catheter  combined with two blood cultures | Burns patients | >15 colony forming unit |
| Flynn 199825 | United States of America | Prospective | 12 | Paired quantitative blood cultures | Paired quantitative blood and segment blood cultures | Children | >5-fold |
| Fortun 200026 | Spain | Prospective | 118 | Paired quantitative blood cultures | Paired quantitative blood and segment blood cultures | General inpatients | >5-fold |
| Franklin 200427 | United States of America | Retrospective | 241 | IVD drawn quantitative blood cultures | Paired quantitative blood and segment blood cultures | Children with cancer | >100 Colony forming unit |
| Gowardman 201228 | Australia | Prospective | 101 | Semi-quantitative segmented blood cultures | Semiquantitative  IVD tip and peripheral venous blood  cultures with the same microorganism | ICU patients | >15 Colony forming unit |
| Gutierrez 199229 | Spain | Prospective | 98 | Semi-quantitative and quantitative segmented blood cultures | Quantitative and qualitative blood and segment blood cultures | General inpatients | >1000 colony forming unit |
| Jones 198630 | United States of America | Prospective | 379 | Semi-quantitative segmented blood cultures | Quantitative and qualitative blood and segment blood cultures | Cancer patients | >15 Colony forming unit |
| Karampatakis 201931 | Greece | Retrospective | 51 | Semi-quantitative segmented blood cultures | Quantitative and qualitative blood and segment blood cultures | ICU patients | ≥ 15 colony forming unit |
| Kelly 199632 | United States of America | Retrospective | 405 | Quantitative segmented blood cultures | Quantitative and qualitative blood and segment blood cultures | General inpatients | >1000 colony forming unit |
| Kite 199733 | United Kingdom | Prospective | 224 | Semi-quantitative and quantitative segment blood cultures | Qualitative blood and segment blood cultures | Surgical ICU patients | ≥1000 colony forming units |
| Kite 199934 | United Kingdom | Prospective | 112 | Semi-quantitative and quantitative segment blood cultures | Qualitative blood and segment blood culture | Surgical ICU patients | ≥1000 colony forming units |
| Maki 197735 | United States of America | Prospective | 50 | Semi-quantitative segment blood cultures | Qualitative blood and segment blood cultures | Burns patients | ≥15 colony forming units |
| Maki 19776 | United States of America | Prospective | 250 | Semi-quantitative segment blood cultures | Qualitative blood and segment blood cultures | General inpatients | ≥15 colony forming units |
| Maki 199650 | United States of America | Prospective | 400 | Semi-quantitative and quantitative segment blood cultures | Culture isolates of  hub, infusion, or  catheter segment  and bloodstream  infections by DNA  subtyping | General inpatients | ≥15 colony forming units |
| Marconi 200836 | Brazil | Prospective | 63 | Semi-quantitative segment blood cultures | Same microorganism (species and profile of susceptibility to agents) isolated from both catheter tips and peripheral blood cultures | Newborns | ≥100 colony forming units |
| Mosca 198737 | United States of America | Prospective | 26 | Paired quantitative segment blood cultures | Clinical follow-up | General inpatients | >5-fold |
| Moyer 198338 | United States of America | Prospective | 73 | Semi-quantitative segment and IVD drawn quantitative blood cultures | Qualitative blood and segment blood cultures | Patients receiving total parenteral nutrition and patients with burns | ≥25 colony forming units |
| Paya 198939 | United States of America | Prospective | 52 | IVD drawn and paired quantitative blood cultures | Qualitative blood and segment blood cultures | Surgical patients | Any growth |
| Raad 199240 | United States of America | Prospective | 128 | Semi-quantitative segment and quantitative segment blood cultures | Qualitative blood and segment blood cultures | General inpatients | ≥1000 colony forming units |
| Raucher 198441 | United States of America | Prospective | 137 | IVD drawn and paired quantitative blood cultures | Qualitative blood and segment blood cultures | Children | >5:1 |
| Rello 198942 | Spain | Prospective | 50 | Semi-quantitative segment and quantitative segment blood cultures | Qualitative blood and segment blood cultures | End stage renal disease patients | ≥1000 colony forming units |
| Rello 199143 | Spain | Prospective | 98 | Semi-quantitative segment and quantitative segment blood cultures | Qualitative blood and segment blood cultures | General inpatients | ≥1000 colony forming units |
| Riboli 20147 | Brazil | Retrospective | 50 | Semi-quantitative segment and quantitative segment blood cultures | Qualitative blood and segment blood cultures | Newborns | ≥1000 colony forming units |
| Sanchez-Conde 200351 | United States of America | Prospective | 197 | Paired quantitative blood cultures | Qualitative blood and segment blood cultures | Adults | ≥5-fold |
| Sherertz 199044 | United States of America | Retrospective | 97 | Quantitative blood cultures | Qualitative blood and segment blood cultures | ICU patients | ≥1000 colony forming units |
| Slobbe 200945 | Netherlands | Prospective | 89 | Quantitative segment blood cultures | Qualitative blood and segment blood cultures | Adults with hemotological disease | ≥15 colony forming units |
| Snydman 198246 | United States of America | Prospective | 100 | Semi-quantitative segment and IVD-drawn quantitative blood cultures | Qualitative blood and segment blood cultures | Patients receiving total parenteral nutrition | Any growth |
| Storti 200647 | Brazil | Prospective | 42 | Semi-quantitative segment and quantitative segment blood cultures | Qualitative blood and segment blood cultures | ICU patients | ≥15 colony forming units |
| Widmer 199248 | United States of America | Prospective | 157 | Semi-quantitative segment drawn blood cultures | Qualitative blood and segment blood cultures | ICU patients | ≥15 colony forming units |
| Widmer 199252 | United States of America | Prospective | 1000 | Semi-quantitative segment drawn blood cultures | Qualitative blood and segment blood cultures | Not reported | ≥15 colony forming units |