**Table 1:** Characteristics of the included studies. RCT: randomised controlled trial, PDS: polydioxanone suture, BMI: body mass index, IH: incisional hernia.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Study** | **Country** | **Type of Study** | **Population** | **Inclusion and exclusion criteria** | **Closure Surgical technique and type of mesh** | **Follow-up**  (months) |
| **De La Portilla 2008** | Spain | RCT | Total  No-mesh: 72  Mesh: 71 | **Inclusion criteria:** All laparotomy incisions and mixed emergency and elective colorectal surgeries.  **Exclusion criteria:** <18-year-old. | **No-mesh**: Mass closure with continuous Poly-p-dioxanone suture.  **Mesh:** Same above technique plus Supra-aponeurotic Polyglycolic mesh | 1 |
| **Garcia-Urena 2015** | Spain | RCT | Total  No-mesh: 54  Mesh: 53 | **Inclusion criteria:** Midline laparotomy incision, Mixed emergency and elective colorectal surgeries.  **Exclusion criteria:** Previous IH, haemodynamically unstable, carcinomatosis. | **No-mesh:** continuous with slowly absorbable suture poly-4 hydroxybutyrate.  **Mesh:** Same above technique plus onlay large-pore polypropylene mesh | 24 |
| **Hoyuela 2018** | Spain | Prospective cohort | Total  No-mesh: 37  Mesh: 15 | **Inclusion criteria:** Vertical or transverse assistance incision for elective laparoscopic-assisted oncological resections, BMI >25.  **Exclusion criteria:** Emergency cases, conversion to open surgery, previous abdominal wall mesh. | **No-mesh:** Absorbable suture for peritoneum and continuous, slowly absorbable suture for the sheath.  **Mesh:** Same above technique plus Retro-fascial pre-muscular sublay polypropylene mesh | 22.3 |
| **Pereira 2019** | Spain | Retrospective Cohort | Total  No-mesh: 61  Mesh: 34 | **Inclusion criteria:** Elective Laparoscopic colorectal cancer surgery.  **Exclusion criteria:** Previous open surgery, conversion to open surgery. | **No-mesh:** Continuous PDS loop.  **Mesh:** onlay mesh of polyvinylidene fluoride. | 13 |
| **Wong 2020** | Australia | Retrospective Cohort | Total  No-mesh: 552  Mesh: 140 | **Inclusion criteria:** Midline laparotomy incision, mixed emergency and elective colorectal surgeries. | **No-mesh:** Continuous with 1 Nylon suture, 1cm bite/gap.  **Mesh:** Same technique plus onlay Polypropylene mesh | 33 |
| **Cano-Valderrama 2022** | Spain | Retrospective Cohort | Total  No-mesh: 211  Mesh: 98 | **Inclusion criteria:** Elective laparotomy for colorectal surgery.  **Exclusion criteria:** Laparoscopic surgery, follow up < 1 month. | **No-mesh**: Single-layer running suture.  **Mesh:** Same above technique plus polypropylene mesh (Sublay in 9 cases and onlay in 79 cases) | 22 |