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# Η ΣΥΜΠΛΗΡΩΜΑΤΙΚΗ ΕΝΔΟΫΑΛΟΕΙΔΙΚΗ ΧΟΡΗΓΗΣΗ ΠΡΟΕΓΧΕΙΡΗΤΙΚΑ ΜΠΕΒΑΣΙΖΟΥΜΑΜΠΗΣ ΣΕ ΑΣΘΕΝΕΙΣ ΠΟΥ ΥΠΟΒΑΛΛΟΝΤΑΙ ΣΕ ΥΑΛΟΕΙΔΕΚΤΟΜΗ ΓΙΑ ΠΑΡΑΓΩΓΙΚΗ ΔΙΑΒΗΤΙΚΗ ΑΜΦΙΒΛΗΣΤΡΟΕΙΔΟΠΑΘΕΙΑ: ΜΙΑ ΜΕΤΑ-ΑΝΑΛΥΣΗ ΚΑΙ ΣΥΣΤΗΜΑΤΙΚΗ ΑΝΑΣΚΟΠΗΣΗ ΤΗΣ ΒΙΒΛΙΟΓΡΑΦΙΑΣ

# THE ADJUNCTIVE USE OF PREOPERATIVE BEVACIZUMAB IN PATIENTS UNDERGOING VITRECTOMY FOR PROLIFERATIVE DIABETIC RETINOPATHY: A META-ANALYSIS AND SYSTEMATIC REVIEW OF THE LITERATURE

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Σεπτέμβριος 2020

# **CONTENTS**

A. Abstract	1
B. Introduction	5
C. Methods	6
D. Results	9
E. Discussion	18
F. Appendix	23
G. References	

## A. Abstract

#### Introduction

Diabetic retinopathy is a leading cause of visual loss in the working population. Pars plana vitrectomy has become the mainstream treatment option for severe proliferative diabetic retinopathy. However, diabetic vitrectomy is quite a challenging operation, especially in cases of tractional retinal detachment, requiring advanced microsurgical techniques. Adjuvant pre-operative use of intravitreal bevacizumab has been an option widely employed, with promising results in terms of increasing the feasibility of surgery and improving prognosis.

### Aim

The aim of the present study is to assess the efficacy of pre-operative intravitreal bevacizumab, by providing an overall estimate that shows its effectiveness in terms of intraoperative complications and post-operative outcomes.

#### Methods

A meticulous literature search was conducted in the PubMed, COCHRANE and ClinicalTrials.gov databases in order to identify all related studies published before 31/8/2020. Prespecified outcome measures were operation time needed, the number of intraoperative iatrogenic retinal breaks occurred, best-corrected visual acuity in the last follow-up visit, the presence of any post-operative vitreous hemorrhage and the need for repeat vitrectomy. Evidence synthesis was performed using Fixed Effects of Random Effects model, depending on the heterogeneity of the included studies. Heterogeneity was assessed using Q-statistic and I<sup>2</sup>. Additional meta-regression models, subgroup analyses and sensitivity analyses were performed when appropriate.

#### Results

Thirteen randomized control trials studying 688 eyes undergoing diabetic vitrectomy were included in this review. The comparison of the intraoperative characteristics showed that bevacizumab reduces operation time (p<0.001), decreases the iatrogenic retinal breaks (p<0.001), provides better long-term visual acuity outcomes (p=0.005<0.05), and prevents vitreous hemorrhages (p<0.001) and repeated vitrectomies (p=0.001<0.05). These findings presented robust in additional sensitivity and subgroup analyses.

## Conclusion

Pre-operative administration of bevacizumab is quite beneficial, as it reduces intraoperative complications and provides better post-operative prognosis.

## Α. Περίληψη

## Εισαγωγή

Η διαβητική αμφιβληστροειδοπάθεια είναι μια κύρια αιτία απώλειας όρασης στη μέση ηλικία. Η υαλοειδεκτομή έχει εξελιχθεί ως η θεραπεία εκλογής της σοβαρής, παραγωγικής διαβητικής αμφιβληστοειδοπάθειας. Ωστόσο, η υαλοειδεκτομή σε πάσχοντες από διαβητική αμφιβληστροειδοπάθεια είναι μια αρκετά απαιτητική επέμβαση, ασθενών ειδικά σε περιπτώσεις επιπλεγμένες Jμ ελκτική αποκόλληση αμφιβληστροειδούς, απαιτώντας ιδιαίτερες μικρο-χειρουργικές τεχνικές. н συμπληρωματική προεγχειρητική ενδοϋαλοειδική χορήγηση μπεβασιζουμάμπης είναι μια ευρέως χρησιμοποιούμενη τεχνική, με ελπιδοφόρα αποτελέσματα όσον αφορά τη διεγχειριτική διευκόλυνση και τη βελτίωση της πρόγνωσης.

#### Στόχοι

Στόχος της παρούσας μελέτης είναι η αποτίμηση της αποτελεσματικότητας της προεγχειρητικής ενδοϋαλοειδικής μπεβασιζουμάμπης, παρέχοντας μια συνολική αποτίμηση της δράσης της όσον αφορά τις διεγχειρητικές επιπλοκές και τα μετεγχειρητικά αποτελέσματα.

#### Μέθοδοι

Μία σχολαστική αναζήτηση βιβλιογραφίας έγινε στις βιβλιοθήκες PubMed, Cochrane και ClinicalTrials.gov για την ανεύρεση σχετικών μελετών με ημερομηνία δημοσίευσης πριν από τις 31/8/2020. Ως αποτελέσματα ορίστηκαν εξ' αρχής η διάρκεια του χειρουργείου, ο αριθμός ιατρογενών ρωγμών αμφιβληστροειδούς, η διορθωμένη οπτική οξύτητα στην τελευταία επίσκεψη του μετεγχειρητικού ελέγχου, η παρουσία μετεγχειρητικής ενδοϋαλοειδικής αιμορραγίας και η ανάγκη για δεύτερη υαλοειδεκτομή. Η σύνθεση των αποτελεσμάτων έγινε με το μοντέλο Σταθερών Επιδράσεων ή το μοντέλο Τυχαίων Επιδράσεων, ανάλογα με την παρουσία ετερογένειας ανάμεσα στις επιμέρους μελέτες. Η ετερογένεια ελέγχθηκε χρησιμοποιώντας τη δοκιμασία Q-statistic και το Ι<sup>2</sup>. Επιπρόσθετα, μετα-παλινδρομήσεις, ανάλυση ανά υπο-ομάδες και αναλύσεις ευαισθησίας εκτελέστηκαν όπου κρίθηκε σημαντικό.

## Αποτελέσματα

Δεκατρείς τυχαιοποιημένες ελεγχόμενες κλινικές δοκιμές που περιλαμβάνουν συνολικά 688 οφθαλμούς που επρόκειτο να υποστούν διαβητική υαλοειδεκτομή συμπεριλήφθηκαν στην ανασκόπηση. Η σύγκριση των διεγχειρητικών χαρακτηριστικών έδειξε μείωση του χρόνου χειρουργείου (p<0.001), μείωση των ιατρογενών ρωγμών αμφιβληστροειδούς (p<0.001), ενώ μετεγχειρητικά παρείχε καλύτερη διορθωμένη οπτική οξύτητα (p=0.005<0.05), αποτρέποντας υαλοειδικές αιμορραγίες (p<0.001) και επανάληψη της υαλοειδεκτομής (p=0.001<0.05). Τα αποτελέσματα παρέμειναν

[3]

στατιστικά σημαντικά στις επιπρόσθετες αναλύσεις ευαισθησίας και σε αναλύσεις ανά υπο-ομάδες.

## Συμπέρασμα

Η προεγχειρητική χορήγηση ενδοϋαλοειδικά μπεβασιζουμάμπης είναι αποτελεσματική, καθώς μειώνει τις διεγχειρητικές επιπλοκές και παρέχει καλύτερη μετεγχειρητική πρόγνωση.

#### **B.** Introduction

Diabetic retinopathy (DR) is a major cause of legal blindness in working-age adults.<sup>1-3</sup> According to the Wisconsin Epidemiologic Study of Diabetic Retinopathy Cohort, 71%-90% of patients suffering from diabetes mellitus (DM) for more than 10 years will have some degree of DR.<sup>4</sup> DR consists of two different clinical entities, non-proliferative diabetic retinopathy (NPDR) and proliferative diabetic retinopathy (PDR). It has been stated that 50% of patients suffering from advanced NPDR, consisting of inner retinal hypoxia, intraretinal microvascular abnormalities and large areas of capillary non-perfusion, will progress to PDR within 1 year, if left untreated.<sup>5</sup>

The differential characteristic of PDR compared to NPDR is the presence of neovascularization either within 1 diameter of the optic disc (NVD) or elsewhere (NVE) in the retina. These new vessels usually grow along the route of the least resistant path, like the absence of an internal limiting membrane on the optic nerve head or even a shallow posterior vitreous detachment (PVD). Moreover, connective tissue forms along the new vessels. This connective tissue helps vitreous traction to be transmitted to the retina, inducing tractional retinal detachment (TRD). NVE almost always forms in areas of retinal ischemia, until PVD occurs. Then the abnormal vessels grow to the vitreous cavity. Contraction of the vitreous and the connective tissue component of these vessels can cause vitreous hemorrhage, TRD, retinoschisis and retinal tears.

Pars plana vitrectomy (PPV) plays a vital role in the management of complications arising from PDR. Non clearing VH, macular involving or macular threatening TRD and combined tractional-rhegmatogenous RD are the main indications.<sup>6</sup> The main objectives of this operation is to remove the blood and vitreous gel from the vitreous cavity, to release retinal traction and to perform laser endophotocoagulation. The very challenging nature of this surgery, may be related with intraoperative complications like iatrogenic retinal breaks, prolonged operation time and intraoperative bleeding, thus worsening the prognosis.<sup>7-9</sup> Furthermore, in about 10% of the patients, repeat vitrectomy is required due to rhegmatogenous RD and recurrent VH.<sup>10</sup>

Bevacizumab is a humanized monoclonal antibody against vascular endothelial growth factor (VEGF). Bevacizumab is approved by the U.S. Food and Drug Administration against cases of metastatic colorectal cancer. Off-label, Bevacizumab 1.25mg/0.05ml is also used intravitreally to halt the progression of PDR. The administration of intravitreal bevacizumab (IVB) in patients with PDR, despite its proven efficacy in the regression of neovascularization, is thought to induce contraction of the fibrovascular tissue, thus leading to TRD or to an aggravation of an existing RD.<sup>11-13</sup>

The adjunctive use of preoperative IVB in patients undergoing vitrectomy for severe PDR has been an interesting debate through the years in terms of balancing the risk/benefit ratio.<sup>14, 15</sup> However, despite its widespread use by retina specialists, there is lack of evidence regarding the effect of preoperative IVB on intraoperative complications during PPV, and on postoperative outcomes for these patients. The present review attempts to evaluate the use of preoperative IVB in patients undergoing vitrectomy for severe PDR.

## C. Methods

## Evidence acquisition

The present study has been conducted in accordance with the Cochrane Handbook for Systematic Reviews of Interventions and is being reported in compliance with the PRISMA Statement guidelines.<sup>16, 17</sup>

## Eligibility criteria

## Inclusion criteria

Studies included in the quantitative analysis were compliant with the following criteria:

• Publication date was before August 31, 2020

- They were designed as randomized control trials (RCT)
- The population under study was patients scheduled for vitrectomy for severe PDR
- At least one group in each RCT was randomized to receive IVB no more than one month before the day of surgery was planned. The control group was randomized to sham injection or no treatment.

## Exclusion criteria

The following exclusion criteria were applied to our study:

- reports not published in English
- conference abstracts
- pilot trials
- retracted papers

## Search method

A meticulous literature search was conducted in the PubMed, COCHRANE and ClinicalTrials.gov databases in order to identify all related studies. Furthermore, for studies retrieved, manual search in their references was performed to find possible relevant reports. The search criteria included the terms "Diabetic Retinopathy [MeSH Terms]", "Bevacizumab [MeSH Terms]" and "Vitrectomy [MeSH Terms]".

All titles and abstracts retrieved, were reviewed for eligibility by a single author (P.D). For titles and abstracts of possibly eligible studies, full texts were screened.

## Quality Assessment

Risk of Bias (RoB) Cochrane Tool for Systematic Reviews of Interventions was used to evaluate the retrieved RCTs.<sup>18</sup> RoB assesses several domains of bias, in view of trial design, conduct and reporting, as of low risk of bias, high risk of bias or unclear risk of bias.

#### Data extraction

The following data were retrieved from the included studies: author's name, number of subjects enrolled, indication for vitrectomy, intervention groups and outcomes measured. One independent author carried out RoB assessment and data extraction.

#### Outcome measures

The primary outcome measure of the present study was the intraoperative characteristics/ complications of diabetic vitrectomy in terms of operation time and iatrogenic intraoperative retinal break development. Secondary outcomes were logMAR best corrected visual acuity (BCVA) at the last follow-up visit, the presence of postoperative VH and the need for second vitrectomy regardless of the cause.

#### Statistical analysis

Review Manager (*Review Manager (RevMan)* [Computer program]. Version 5.4, The Cochrane Collaboration, 2020) was used for all the statistical analyses. For continuous data, mean differences (MDs) and their 95% confidence intervals (95% Cls) were calculated for each time frame. For binary outcomes, Odds Ratios (ORs) and their 95% Cls were used. Fixed effects (FE) or random effects (RE) were used for data synthesis. The weight of each study was calculated as the inverse variance of individual effects. Heterogeneity among studies was tested with both the Q-statistic and I<sup>2</sup>.<sup>19</sup> Heterogeneity was assumed if P<sub>Q</sub><0.1 or I<sup>2</sup>>50%. If significant heterogeneity was found, the result was based on the RE model and heterogeneity was explored with metaregression, sensitivity analyses and subgroup analyses. Otherwise FE model was used. Publication bias was assessed with forest plot. In all comparisons, sensitivity analyses were performed with the method of leave-one-out. For the exploration of any possible heterogeneity present among studies, subgroup analyses and meta-regressions were performed.

### D. Results

#### Study selection

The flow diagram of the study selection is presented in Table 1. Last literature search was performed on September 1<sup>st</sup> 2020. Of the 154 potentially relevant studies retrieved from electronic search and related references, 20 were excluded after searching for duplicates. Afterwards, these 134 single records were meticulously scanned for compliance with our eligibility criteria. Finally, 16 met all the predefined inclusion criteria.<sup>20-35</sup> Of these studies, 3 were excluded from the quantitative analysis because their results could not be pooled in any of the prespecified comparisons,<sup>33-35</sup> so that 13 studies were included in the meta-analysis. Whenever it was possible, communication was established with the corresponding authors to retrieve more data from the published studies.

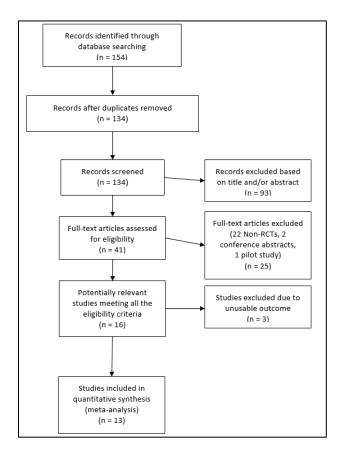


Table 1 Flow diagram of the literature search

[9]

## Studies characteristics and Methodological quality assessment

There are 5 studies comparing pre-operative IVB versus sham injection,<sup>20, 22, 23, 28, 31</sup> and 8 studies comparing pre-operative IVB versus no treatment.<sup>21, 24-27, 29, 30, 32</sup> All studies, except for one, included patients suffering not only from non-clearing VH but also from TRD. The only exception was the study of Faisal et al. that analyzed patients suffering exclusively from VH.<sup>25</sup> In one study, there are two different time frames examined for pre-operative IVB administration.<sup>23</sup> These two groups were combined in the present study in order to avoid double counting bias.<sup>36</sup> Moreover, in two studies IVB was used in concentrations different from the standard 1.25/0.05ml.<sup>28, 29</sup> Details on number of subjects enrolled, indication for vitrectomy, intervention groups and outcomes measured are presented in Table 2.

STUDY	CASES	INDICATION FOR VITRECTOMY	INTERVENTION GROUPS	OUTCOMES MEASURED
Ahmadieh 2009	68	Non-clearing VH, TRD, active or progressive PDR	<ul> <li>IVB 1.25mg         <ul> <li>1 week</li> <li>pre-op</li> </ul> </li> <li>Sham – 1</li> <li>week pre-op</li> </ul>	<ul> <li>Post-op VH</li> <li>BCVA</li> <li>Adverse events</li> </ul>
Ahn 2011	107	Non-clearing VH, TRD, vitreoretinal adhesions	<ul> <li>IVB 1.25mg <ul> <li>1-14 days</li> <li>pre-op</li> </ul> </li> <li>IVB 1.25 mg <ul> <li>intra-op</li> <li>No IVB</li> </ul> </li> </ul>	<ul> <li>Post-op VH</li> <li>BCVA</li> <li>Initial time of vitreous clearing</li> </ul>
Arevalo 2019	214	TRD with or without RRD, with or without VH	<ul> <li>IVB 1.25mg         <ul> <li>3-5 days pre-op</li> </ul> </li> <li>Sham – 3-5 days pre-op</li> </ul>	<ul> <li>Intraoperative bleeding</li> <li>Iatrogenic retinal break</li> <li>Post-op VH</li> <li>BCVA improvement</li> <li>Central Retinal Thickness</li> <li>Retinal Redetachment</li> <li>Adverse events</li> </ul>
Di Lauro 2010	72	VH, TRD	<ul> <li>IVB 1.25 mg         <ul> <li>1 week</li> <li>pre-op</li> </ul> </li> </ul>	<ul> <li>Intraoperative bleeding</li> <li>Endodiathermy</li> </ul>

			<ul> <li>IVB 1.25mg         <ul> <li>3 weeks</li> <li>pre-op</li> </ul> </li> <li>Sham – 3         <ul> <li>weeks pre-op</li> </ul> </li> </ul>	<ul> <li>latrogenic retinal break</li> <li>Relaxing Retinotomy</li> <li>Operation Time</li> <li>Post-op VH</li> </ul>
El-Batarny 2008	30	VH, TRD	<ul> <li>IVB 1.25mg         <ul> <li>5-7 days             pre-op</li> <li>No IVB</li> </ul> </li> </ul>	<ul> <li>Operation time</li> <li>Intraoperative bleeding</li> <li>Endodiathermy</li> <li>latrogenic retinal break</li> <li>Retinotomies</li> <li>Tamponade <ul> <li>RD</li> <li>BCVA</li> <li>Post-op VH</li> <li>Adverse events</li> </ul> </li> </ul>
Faisal 2018	56	VH	<ul> <li>IVB 1.25mg         <ul> <li>7 days pre- op</li> <li>No IVB</li> </ul> </li> </ul>	<ul> <li>Surgical time</li> <li>latrogenic retinal break</li> <li>Intraoperative bleeding</li> </ul>
Farahvash 2011	35	VH, TRD	<ul> <li>IVB 1.25mg         <ul> <li>1 week</li> <li>pre-op</li> <li>No IVB</li> </ul> </li> </ul>	<ul> <li>IVB adverse events</li> <li>Retinotomies</li> <li>Tamponade</li> <li>Endodiathermy</li> <li>latrogenic retinal breaks</li> <li>Score of bleeding</li> <li>RD</li> </ul>
Hernandez- Da Mota 2010	40	Advanced PDR, TRD	<ul> <li>IVB 1.25mg         <ul> <li>2 days pre- op</li> <li>No IVB</li> </ul> </li> </ul>	<ul> <li>Operation time</li> <li>Intraoperative bleeding         <ul> <li>Ocular</li> <li>Hypertension</li> <li>RD</li> </ul> </li> <li>Neovascular glaucoma         <ul> <li>(NVG)</li> <li>Post-op VH</li> <li>Retinotomies</li> </ul> </li> </ul>
Manabe 2015	66	Non-clearing VH, TRD	<ul> <li>IVB 0.16mg         <ul> <li>1 day pre- op</li> <li>Sham – 1 day pre-op</li> </ul> </li> </ul>	<ul> <li>VEGF in vitreous</li> <li>Endodiathermy</li> </ul>

				<ul> <li>latrogenic retinal breaks</li> <li>Endotamponade</li> <li>Operational time</li> <li>Post-op VH</li> <li>Elevation of IOP <ul> <li>NVG</li> <li>BCVA</li> <li>Second</li> <li>Vitrectomy</li> </ul> </li> <li>Adverse events</li> </ul>
Modarres 2009	40	TRD	<ul> <li>IVB 2.5mg – 3-5 days pre- op</li> <li>No IVB</li> </ul>	<ul> <li>BCVA</li> <li>Endodiathermy</li> <li>Endotamponade</li> <li>Operation time</li> <li>Post-op VH</li> <li>RD</li> <li>Second</li> <li>Vitrectomy</li> </ul>
Rizzo 2008	22	TRD, TRD with VH, combined tractional and rhegmatogenous RD	<ul> <li>IVB 1.25mg         <ul> <li>5-7 days             pre-op</li> <li>No IVB</li> </ul> </li> </ul>	<ul> <li>Operation time</li> <li>Intraoperative bleeding</li> <li>Endodiathermy</li> <li>Intraoperative retinal breaks</li> <li>Post-op anatomic attachment</li> </ul>
Sohn 2012	20	TRD, combined tractional and rhegmatogenous RD	<ul> <li>IVB 1.25mg         <ul> <li>3-7 days pre-op</li> </ul> </li> <li>Sham – 3-7 days pre-op</li> </ul>	<ul> <li>Vitreous VEGF</li> <li>Vitreous CTGF</li> <li>Intraoperative bleeding</li> <li>Post-op BCVA</li> <li>Endotamponade</li> </ul>
Zaman 2013	54	Non-clearing VH, TRD, pre-macular subhyaloid bleeding	<ul> <li>IVB 1.25mg</li> <li>– 1 week</li> <li>No IVB</li> </ul>	<ul> <li>BCVA</li> <li>Post-op VH</li> <li>Rubeosis iridis</li> <li>Hyphaema</li> </ul>

Table 2 Studies Characteristics

[12]

The quality of the studies included has been assessed by using the RoB Cochrane tool for Systematic Reviews of interventions and it is presented in Figure 1.



Figure 1 RoB assessment

## A. Analysis per operation time

Eight studies with a total of 540 patients provided data for the comparison of total operation time. The overall pooled difference between the examined study groups after synthesizing the outcomes of the included studies revealed decreased total operation time with IVB [RE MD=-20.22, 95% CI = (-26.25, -14.19), P<sub>Q</sub>=0.004, I<sup>2</sup>=66% (Figure 2)].

	Pre	e-op IVE	3	1	No IVB			Mean Difference	Mean Difference
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% Cl	IV, Random, 95% Cl
Arevalo 2019	71.3	32.1	102	83.6	38.7	112	14.0%	-12.30 [-21.80, -2.80]	
di Lauro 2010	67	19.45	48	84	12	24	16.4%	-17.00 [-24.30, -9.70]	
El-Batarny 2008	61.6	14.5	15	93.3	11.6	15	14.1%	-31.70 [-41.10, -22.30]	_ <b></b>
Faisal 2018	64.1	10.35	28	80.5	10.22	28	18.4%	-16.40 [-21.79, -11.01]	
Hernandez-Da Mota 2010	62	31	20	98	35	20	6.2%	-36.00 [-56.49, -15.51]	
Manabe 2015	49	20	32	56	27	34	12.2%	-7.00 [-18.42, 4.42]	+
Modarres 2009	62	57.3	22	95.5	36	18	3.6%	-33.50 [-62.65, -4.35]	
Rizzo 2008	57	9	11	83	11	11	15.2%	-26.00 [-34.40, -17.60]	
Total (95% CI)			278			262	100.0%	-20.22 [-26.25, -14.19]	•
Heterogeneity: Tau <sup>2</sup> = 43.94	l; Chi <b>²</b> = 3	20.61, d	lf = 7 (F	e = 0.004	4); I <sup>2</sup> = 6	6%			-50 -25 0 25 50
Test for overall effect: Z = 6.	57 (P < 0	.00001;	)						-50 -25 0 25 50 Favours (pre-op IVB) Favours (No IVB)

Figure 2 Analysis per operation time

The studies included in this analysis showed significant heterogeneity, thus RE model was used. In order to explore this heterogeneity, subgroup analysis has been performed. Studies including patients who received IVB less than 5 days pre-operatively and studies including patients who received IVB 5-21 days pre-operatively were analyzed separately. The beneficial effect of pre-operative IVB remained statistically significant in all comparisons (Figures 3 and 4).

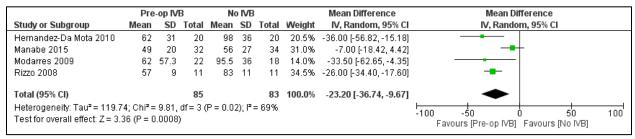


Figure 3 Analysis per operation time in studies administering IVB less than 5 days pre-op

	Pr	e-op IVE	3	1	lo IVB			Mean Difference	Mean Difference
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% Cl	IV, Random, 95% Cl
Arevalo 2019	71.3	32.1	102	83.6	38.7	112	21.8%	-12.30 [-21.80, -2.80]	<b>_</b>
di Lauro 2010	67	19.45	48	84	12	24	26.1%	-17.00 [-24.30, -9.70]	
El-Batarny 2008	61.6	14.5	15	93.3	11.6	15	22.0%	-31.70 [-41.10, -22.30]	_ <b>-</b> _
Faisal 2018	64.1	10.35	28	80.5	10.22	28	30.0%	-16.40 [-21.79, -11.01]	
Total (95% CI)			193			179	100.0%	-19.03 [-26.02, -12.04]	•
Heterogeneity: Tau <sup>2</sup> = Test for overall effect					0.02); l <sup>a</sup>	²= 70%	1		-50 -25 0 25 50 Favours [Pre-op IVB] Favours [No IVB]

Figure 4 Analysis per operation time in studies administering IVB 5-21 days pre-op

Moreover, a meta-regression model including number of surgeons performing the operations (p=0.30>0.05), the performance of delamination during surgery (p=0.421>0.05), the performance of combined phacovitrectomy vs. vitrectomy alone (p=0.26>0.05) and the mean age of patients (p=0.57>0.05) showed no statistically significant difference for the aforementioned factors.

Thus, it can be assumed that the heterogeneity may be due to the different experience and skills of surgeons among studies or may have to do with the surgical equipment, the complexity of cases and the way surgical time was measured. However, the fact that the same prespecified surgeons performed the operations in each study separately suggests that our findings are robust.

## B. Analysis per iatrogenic intraoperative retinal break

In order to compare the occurrence of iatrogenic intraoperative retinal breaks, data from 6 studies, including 498 individuals, were synthesized. The pre-operative administration of IVB was associated with significantly less breaks [FE OR=0.37, 95% CI = (0.24, 0.58), P<sub>Q</sub>=0.22, I<sup>2</sup>=29% (Figure 5)].

	Pre-op	NB	No IV	′B		Odds Ratio	Odds Ratio
Study or Subgroup	Events	Total	Events	Total	Weight	M-H, Fixed, 95% Cl	M-H, Fixed, 95% Cl
Ahmadieh 2009	2	35	1	33	1.5%	1.94 [0.17, 22.46]	
Arevalo 2019	35	102	66	112	65.2%	0.36 [0.21, 0.63]	
di Lauro 2010	1	48	4	24	8.2%	0.11 [0.01, 1.01]	
Faisal 2018	2	28	8	28	11.7%	0.19 [0.04, 1.01]	
Manabe 2015	5	32	5	34	6.5%	1.07 [0.28, 4.13]	<b>-</b>
Rizzo 2008	0	11	4	11	6.8%	0.07 [0.00, 1.55]	•
Total (95% CI)		256		242	100.0%	0.37 [0.24, 0.58]	◆
Total events	45		88				
Heterogeneity: Chi <sup>2</sup> =	7.03, df=	5 (P =	0.22); <b>I<sup>z</sup> =</b>	29%			
Test for overall effect	: Z = 4.30 (	(P < 0.0	001)				0.01 0.1 1 10 100 Favours (Pre-op IVB) Favours (No IVB)

Figure 5 Analysis per iatrogenic intraoperative retinal break

## C. Analysis per logMAR BCVA at the last follow-up visit

Regarding the comparison of logMAR BCVA prognosis between groups treated with pre-operative IVB and patients not receiving pre-operative IVB, data from 6 studies including 440 subjects were synthesized. A statistically significant better long-term BCVA

was found in the groups treated with pre-operative IVB [FE MD=-0.13, 95% CI = (-0.22, - 0.04),  $P_Q=0.37$ ,  $I^2=7\%$  (Figure 6)].

	Pre	-op IV	В	N	o IVB			Mean Difference	Mean Difference
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Fixed, 95% CI	IV, Fixed, 95% Cl
Arevalo 2019	0.6	0.48	102	0.7	0.31	112	64.6%	-0.10 [-0.21, 0.01]	-8-1
di Lauro 2010	0.84	1.09	48	1.2	1.4	24	1.9%	-0.36 [-1.00, 0.28]	
El-Batarny 2008	0.75	0.68	15	0.91	0.67	15	3.3%	-0.16 [-0.64, 0.32]	
Manabe 2015	0.46	0.54	32	0.43	0.48	34	12.7%	0.03 [-0.22, 0.28]	
Modarres 2009	1.1	0.4	22	1.4	0.3	18	16.4%	-0.30 [-0.52, -0.08]	(
Sohn 2012	1.04	0.82	9	1.49	0.93	9	1.2%	-0.45 [-1.26, 0.36]	•
Total (95% CI)			228			212	100.0%	-0.13 [-0.22, -0.04]	•
Heterogeneity: Chi <sup>2</sup> =	5.36, df	= 5 (P	= 0.37)	; l² = 79	6				
Test for overall effect	Z = 2.84	(P = 0	).005)	-					-1 -0.5 0 0.5 1 Favours (Pre-op IVB) Favours (No IVB)

Figure 6 Analysis per logMAR BCVA at the last follow-up visit

In order to examine whether the analysis of different time frames post-operatively and the inclusion of patients with different baseline logMAR BCVA has introduced any heterogeneity in this data synthesis, a meta-regression model was developed. Both the time of last follow-up visit (p=0.55>0.05) and the baseline logMAR BCVA (p=0.26>0.05) were not found statistically significant. When controlling for combined phacovitrectomy as a confounder, a sensitivity analysis by excluding the only study (EI-Batarny et al.<sup>24</sup>) that reported the performance of combined surgery provided statistically significant results. (see Appendix)

## D. Analysis per presence of post-operative VH

Data from 9 studies examining 654 patients were synthesized in this comparison. The administration of pre-operative IVB was associated with statistically significantly less post-operative VHs [RE OR=0.21, 95% CI = (0.11, 0.40), P<sub>Q</sub>=0.03, I<sup>2</sup>=53% (Figure 7)].

	Pre-op	IVB	No IV	'B		Odds Ratio	Odds Ratio
Study or Subgroup	Events	Total	Events	Total	Weight	M-H, Random, 95% Cl	M-H, Random, 95% Cl
Ahmadieh 2009	9	35	26	33	14.3%	0.09 [0.03, 0.29]	<b>_</b>
Ahn 2011	13	36	18	34	16.1%	0.50 [0.19, 1.31]	+
Arevalo 2019	29	102	48	112	20.6%	0.53 [0.30, 0.94]	
di Lauro 2010	3	48	6	24	10.9%	0.20 [0.05, 0.89]	
El-Batarny 2008	0	15	4	15	4.0%	0.08 [0.00, 1.69]	
Hernandez-Da Mota 2010	4	20	8	20	11.5%	0.38 [0.09, 1.54]	
Manabe 2015	1	32	8	34	6.9%	0.10 [0.01, 0.89]	
Modarres 2009	0	22	7	18	4.2%	0.03 (0.00, 0.65)	← → ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓
Zaman 2013	3	24	20	30	11.4%	0.07 [0.02, 0.30]	<b>_</b>
Total (95% CI)		334		320	100.0%	0.21 [0.11, 0.40]	◆
Total events	62		145				
Heterogeneity: Tau <sup>2</sup> = 0.47;	Chi <sup>2</sup> = 17.	20, df=	8 (P = 0.	.03); I <sup>z</sup> =	= 53%		0.005 0.1 1 10 20
Test for overall effect: Z = 4.	63 (P ≺ 0.I	00001)					0.005 0.1 1 10 20 Favours (Pre-op IVB) Favours (No IVB)

Figure 7 Analysis per presence of post-operative VH

The meta-regression model which analyzed total follow-up time (p=0.26>0.05) and mean age of patients (p=0.35>0.05) was not found statistically significant.

## E. Analysis of the need for second vitrectomy

The need for second vitrectomy between groups was analyzed combining data from 8 studies including 568 subjects. The administration of pre-operative IVB was found to be associated with a lower risk of post-operative second vitrectomy of any cause [FE OR=0.34, 95% CI = (0.19, 0.59), P<sub>Q</sub>=0.82, I<sup>2</sup>=0% (Figure 8)].

							/-
	Pre-op	IVB	No IV	в		Odds Ratio	Odds Ratio
Study or Subgroup	Events	Total	Events	Total	Weight	M-H, Fixed, 95% Cl	M-H, Fixed, 95% Cl
Ahn 2011	3	36	3	34	6.4%	0.94 [0.18, 5.01]	
Arevalo 2019	9	102	28	112	55.3%	0.29 [0.13, 0.65]	
di Lauro 2010	1	48	2	24	5.9%	0.23 [0.02, 2.72]	
El-Batarny 2008	1	15	2	15	4.2%	0.46 [0.04, 5.75]	
Farahvash 2011	1	18	1	18	2.1%	1.00 [0.06, 17.33]	
Hernandez-Da Mota 2010	1	20	4	20	8.6%	0.21 [0.02, 2.08]	
Manabe 2015	1	32	7	34	14.9%	0.12 [0.01, 1.08]	
Modarres 2009	1	22	1	18	2.4%	0.81 [0.05, 13.92]	
Total (95% CI)		293		275	100.0%	0.33 [0.19, 0.59]	•
Total events	18		48				
Heterogeneity: Chi <sup>2</sup> = 3.63, (	df = 7 (P =	0.82);	I² = 0%				0.01 0.1 1 10 100
Test for overall effect: $Z = 3.3$	77 (P = 0.0	0002)					Favours [Pre-op IVB] Favours [No IVB]

Figure 8 Analysis of the need for second vitrectomy

In order to increase the robustness of this comparison, we conducted subgroup analyses examining separately the need for second vitrectomy by cause. Pre-operative IVB proved to be of benefit for preventing second vitrectomy due to both RD [FE OR=0.44, 95% CI = (0.20, 0.96), P<sub>Q</sub>=0.93, I<sup>2</sup>=0%] and VH [FE OR=0.36, 95% CI = (0.16, 0.85), P<sub>Q</sub>=0.46, I<sup>2</sup>=0%] (Figures 9 and 10).

	Pre-op	IVB	No IV	/B		Odds Ratio	Odds Ratio
Study or Subgroup	Events	Total	Events	Total	Weight	M-H, Fixed, 95% Cl	M-H, Fixed, 95% Cl
Arevalo 2019	6	102	14	112	62.0%	0.44 [0.16, 1.19]	
El-Batarny 2008	1	15	2	15	9.2%	0.46 [0.04, 5.75]	
Farahvash 2011	1	18	1	17	4.8%	0.94 [0.05, 16.35]	
Hernandez-Da Mota 2010	1	20	4	20	18.8%	0.21 [0.02, 2.08]	
Modarres 2009	1	22	1	18	5.2%	0.81 [0.05, 13.92]	
Total (95% CI)		177		182	100.0%	0.44 [0.20, 0.96]	-
Total events	10		22				
Heterogeneity: Chi <sup>2</sup> = 0.85, (	df = 4 (P =	0.93);1	l² = 0%				
Test for overall effect: Z = 2.0	06 (P = 0.0	04)					0.01 0.1 1 10 100 Favours [experimental] Favours [control]

Figure 9 Analysis of the need for second vitrectomy due to RD

	Pre-op	IVB	No IV	/B		Odds Ratio	Odds Ratio
Study or Subgroup	Events	Total	Events	Total	Weight	M-H, Fixed, 95% Cl	M-H, Fixed, 95% Cl
Ahn 2011	3	36	3	34	14.6%	0.94 [0.18, 5.01]	
Arevalo 2019	3	102	14	112	67.0%	0.21 [0.06, 0.76]	
di Lauro 2010	1	48	2	24	13.5%	0.23 [0.02, 2.72]	
Manabe 2015	1	32	1	34	4.9%	1.06 [0.06, 17.77]	
Total (95% CI)		218		204	100.0%	0.36 [0.16, 0.85]	-
Total events	8		20				
Heterogeneity: Chi <sup>2</sup> =	2.60, df =	3 (P =	0.46); I <sup>z</sup> =	:0%			
Test for overall effect:	•	•					0.01 0.1 1 10 100 Favours [Pre-op IVB] Favours [No IVB]

Figure 10 Analysis of the need for second vitrectomy due to VH

## Sensitivity analyses

In order to improve the robustness of our findings, for every comparison done additional sensitivity analyses were performed according to the leave-one-out method. All of the comparisons proved to be statistically significant and in accordance with our initial findings (see Appendix for analytic details).

## Publication bias

Publication bias was assessed for each comparison separately using funnel plots. All plots were symmetrical except for operation time. This asymmetry may be the result of the imbalance in surgeons' skills and different surgical equipment among studies (see Appendix for plots).

#### E. Discussion

Advanced PDR treatment remains a surgical challenge, especially in cases of TRD. Uncontrolled intraoperative bleeding increases surgical time and may lead to intraoperative complications such as the development of iatrogenic retinal breaks because of impaired retina view. Moreover, segmentation and delamination of fibrovascular membranes represents one of the most challenging vitreoretinal steps with increased risk or retinal tears or intraoperative bleeding. Intravitreal bevacizumab

[18]

preoperatively has been used off-label to improve surgical outcomes for these patients.<sup>30</sup> Our results suggest that a single pre-operative dose of IVB is associated with decreased mean surgical time and reduced number of iatrogenic retinal breaks. Additionally, patients pre-treated with IVB were shown to have statistically significant better BCVA at their last follow-up visit and fewer episodes of post-operative VHs. The reduction in post-operative VHs is probably due to the more efficient release of traction in these patients, since bevacizumab wears off post-operatively. Also, the need for second vitrectomy for any cause was statistically significant smaller. These findings are of great value providing evidence for the use by vitreoretinal surgeons of a very useful tool that may facilitate the management of these challenging cases, which in their vast majority belong to the working population. Vision loss in this group of patients can have a series of negative personal and social consequences.<sup>37</sup>

The first documented use of pre-operative IVB in diabetic vitrectomy was by Chen et al. who administered a single IVB in a 27 year old patient reporting promising results.<sup>38</sup> Since then, many studies have been conducted to test the effects of pre-operative IVB in patients undergoing diabetic vitrectomy.

Regarding the effect of pre-operative IVB on surgical procedure, Yeh et al. conducted a comparative case-control study where they alternately assigned diabetic patients requiring vitrectomy either to a single IVB injection 1 week before surgery or no pre-operative IVB.<sup>39</sup> They concluded that IVB reduces intraoperative bleeding and helps in quicker anatomic success. However, it cannot control recurrent hemorrhage and it may increase vitreoretinal traction. These findings are in accordance with the study of Oshima et al., who reported shorter surgical time and less intraoperative bleeding when comparing IVB prior to microincision vitrectomy (25-g and 23-g) surgery versus conventional (20-g) vitrectomy.<sup>40</sup> The reduction of intra-operative bleeding was also postulated by an institutional study measuring the number of erythrocytes in the fluid retrieved from the vitrectomy cassette in people treated with IVB prior to vitrectomy.<sup>33</sup>

Considering the post-operative outcomes of a single pre-operative IVB, a retrospective chart review performed by Gupta et al. as part of the Diabetic Retinopathy In Various Ethnic Groups (DRIVE-UK) study reported that patients treated with IVB prior

[19]

to vitrectomy had better long-term BCVA and developed statistically significantly less post-operative VH.<sup>41</sup> In a subgroup analysis of the DRIVE-UK study, pre-operative IVB was found to have a protective effect on the development of diabetic macular edema post-operatively at 12 months follow-up.<sup>42</sup> Pokroy et al. suggested that pre-operative IVB is particularly advantageous in young patients regarding BCVA improvement and surgical time reduction.<sup>43</sup> The reduction of post-operative VH has been analyzed in many observational studies as well.<sup>44, 45</sup> In a retrospective chart review, Lo et al. raised concerns about the favorable results of pre-operative IVB in post-operative VH.<sup>46</sup> Nevertheless, the two groups analyzed were quite heterogenous regarding age and surgical technique used. Moreover, Yang et al. suggested that pre-operative IVB resulted in faster vitreous clear up postoperatively in eyes undergoing diabetic vitrectomy with C<sub>3</sub>F<sub>8</sub> tamponade.<sup>47</sup> Regarding the need for repeat PPV, Hu et al. suggested that IVB prior to vitrectomy might reduce the rate of reoperation in patients with VH alone, but they found a higher rate of second vitrectomy in IVB patients with combined VH and TRD.<sup>48</sup> Lastly, the beneficial effect of pre-operative IVB has been reported in East-African patients as well.<sup>49</sup>

In order to find the optimal time frame for the administration of IVB, Castillo et al. conducted an RCT, assigning patients to receive IVB either 5-10 days or 1-3 days before surgery.<sup>50</sup> They found that the administration of IVB 5-10 days prior to vitrectomy had statistically significantly better outcome regarding BCVA. However, there was no difference between groups in intraoperative complications and surgical time, a result in agreement with our subgroup analyses.

Regarding the required dose of IVB in order to provide its beneficial effect, Hattori et al. reported that 0.16mg dose was as effective as 1.25mg in terms of reducing intraoperative bleeding.<sup>51</sup>

The benefits of pre-operative IVB have been also demonstrated at molecular level. By analyzing neovascular membranes from subjects undergoing diabetic vitrectomy, Han et al. concluded that patients pre-treated with IVB had statistically significant less vascular endothelial cells, expression of VEGF and hypoxia inducible factor-1a.<sup>34</sup> Furthermore, the reduction of vitreous VEGF levels has been shown by Sohn et al.<sup>31</sup>

A Cochrane review by Smith et al. highlighted the beneficial effect of a single preoperative IVB injection in reducing early post-operative VH and post-operative RD, however the inclusion of a retracted paper might have influenced the results.<sup>52</sup> Two previous meta-analyses support the adjunctive use of pre-operative IVB in diabetic vitrectomy.<sup>53, 54</sup> However, according to authors, the small number of studies included could not provide robust conclusions, there were concerns about possible publication bias and methodological flaws while the publication of more studies with larger sample size recently provided additional evidence which is worthwhile reviewing systemically.

The present meta-analysis has several limitations in terms of included data. First of all, the majority of the studies included analyze small samples (<100 subjects), thus reducing their statistical power. Moreover, there is some diversity among studies about the indication for diabetic vitrectomy and the type of PPV used. Furthermore, for this metaanalysis only three electronic databases were searched to retrieve relevant studies. However, by including PubMed and Cochrane, hardly any high-quality published study was overlooked. Different follow-up times in each study were adjusted by conducting additional meta-regression analyses. Regarding the quality of individual studies included in the present meta-analysis, there is only a minor disparity. While Arevalo et al. conducted a study with sufficient sample size, the multi-center nature of their research induces a diversity in surgical techniques and equipment used.<sup>22</sup> The double-masked RCT of Ahmadieh et al. has a big drop-out rate from the calculated sample size, thus not establishing significant statistical power.<sup>20</sup> The lack of a pre-specified analysis plan of the data combined with the execution of multiple analyses in the studies of Zaman et al., Hernandez-Da Mota et al. and Farahvash et al. makes them suspect for selective report of the outcome.<sup>26, 27, 32</sup> In the study of Di Lauro et al., baseline differences among treatment groups may influence the results.<sup>23</sup> The lack of sham injection, small baseline differences between groups and no double-masking might affect the results in the study of Ahn et al.<sup>21</sup> The large range of follow-up times combined with lack of masking may predispose to bias in the study of El-Batarny et al.<sup>24</sup> The main sources of bias in the study of Rizzo et al. is the relatively small sample size and the limited follow-up time.<sup>30</sup> Limited follow-up time was also an issue in the study of Manabe et al.<sup>28</sup> Possible yet unavoidable lack of masking together with a questionable classification system for fibrovascular proliferation in PDR are the main issues in the study of Modarres et al.<sup>29</sup> Lack of masking

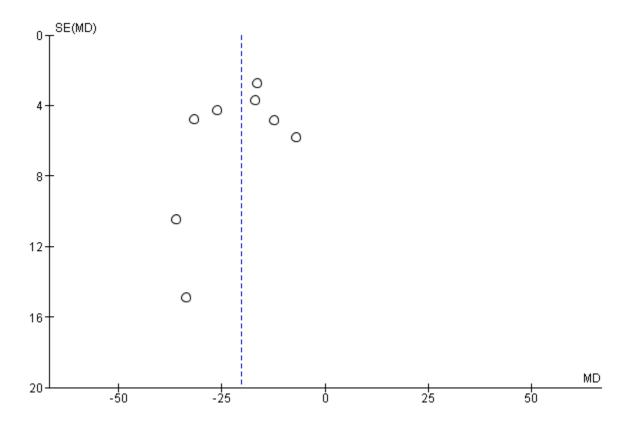
is also a limitation in the study of Faisal et al.<sup>25</sup> Finally, the very small sample size in the study of Sohn et al. reduces its statistical power.<sup>31</sup>

To the best of our knowledge the present study is the most comprehensive metaanalysis performed assessing pre-operative use of IVB in patients undergoing diabetic vitrectomy, having included all the recent trials published on this issue. The thorough sensitivity and subgroup analyses are strengths of our study supporting the robustness of our results.

In conclusion, based on the current evidence, the adjunctive use of pre-operative bevacizumab in patients undergoing vitrectomy for PDR is quite beneficial as it improves the feasibility of the operation by reducing the surgical time and the incidence of iatrogenic retinal breaks; it also provides patients with better visual prognosis and less post-operative VHs. Moreover, our results support the protective role of pre-operative IVB against the need for second vitrectomy. Studies comparing different treatment doses and times for the pre-operative administration of IVB are necessary to further investigate this issue.

## Appendix – Funnel plots and sensitivity analyses

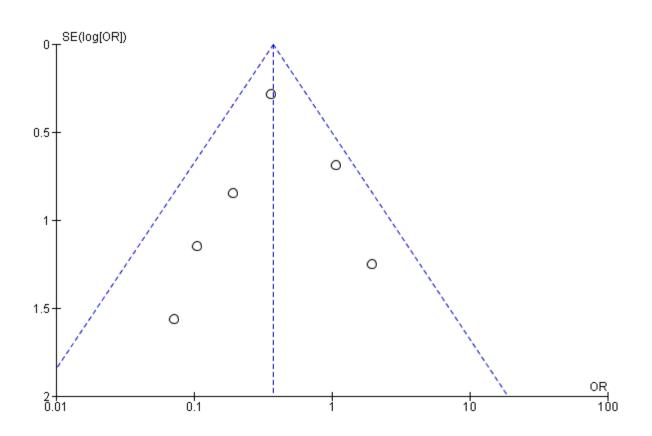
# A. Operation Time

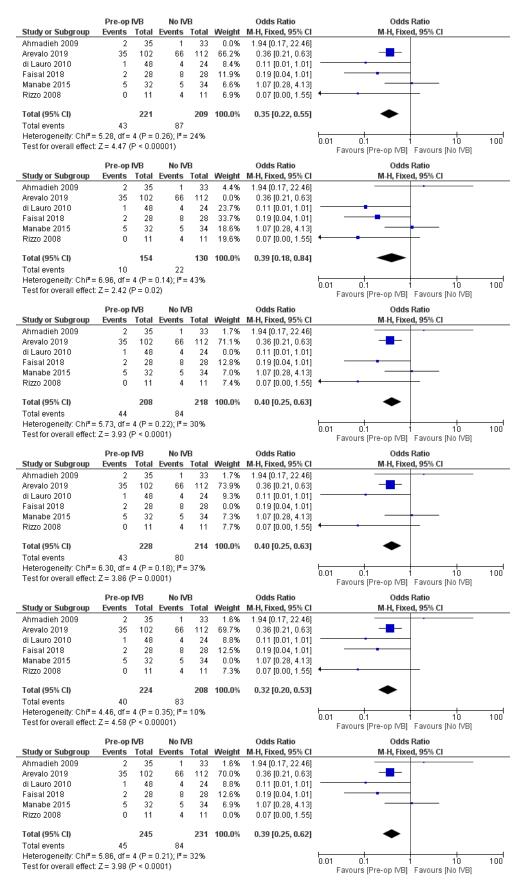


Study or Subgroup	Mean		Total	Mean	lo IVB SD	Total	Weight	Mean Difference IV, Random, 95% Cl	Mean Difference IV, Random, 95% Cl
Arevalo 2019 di Lauro 2010	71.3 67	32.1 19.45	102 48	83.6 84	38.7 12	112 24	0.0% 18.9%	-12.30 [-21.80, -2.80] -17.00 [-24.30, -9.70]	]
El-Batarny 2008	61.6	14.5	15	93.3	11.6	15	16.5%	-31.70 [-41.10, -22.30]	_ <b>-</b>
Faisal 2018 Hernandez-Da Mota 2010	64.1 62	10.35 31	28 20	80.5 98	10.22 35	28 20	21.1% 7.4%	-16.40 [-21.79, -11.01] -36.00 [-56.49, -15.51]	
Manabe 2015 Modarres 2009	49 62	20 57.3	32 22	56 95.5	27 36	34 18	14.2% 4.3%	-7.00 [-18.42, 4.42] -33.50 [-62.65, -4.35]	
Rizzo 2008	57	9	11	83	11	11	17.6%	-26.00 [-34.40, -17.60]	
Total (95% CI)			176			150	100.0%	-21.57 [-28.23, -14.90]	•
Heterogeneity: Tau <sup>2</sup> = 47.25 Test for overall effect: Z = 6.			'= 6 (P	= 0.005	5); I² = 6	7%			-50 -25 0 25 50
		e-op IVB			lo IVB			Mean Difference	Favours [pre-op IVB] Favours [No IVB] Mean Difference
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% Cl	IV, Random, 95% Cl
Arevalo 2019 di Lauro 2010	71.3 67	32.1 19.45	102 48	83.6 84	38.7 12	112 24	16.7% 0.0%	-12.30 [-21.80, -2.80] -17.00 [-24.30, -9.70]	
El-Batarny 2008 Faisal 2018	61.6 64.1	14.5 10.35	15 28	93.3 80.5	11.6 10.22	15 28	16.8% 20.6%	-31.70 [-41.10, -22.30] -16.40 [-21.79, -11.01]	_ <b>-</b>
Hernandez-Da Mota 2010	62	31	20	98	35	20	8.2%	-36.00 [-56.49, -15.51]	
Manabe 2015 Modarres 2009	49 62	20 57.3	32 22	56 95.5	27 36	34 18	14.8% 5.0%	-7.00 [-18.42, 4.42] -33.50 [-62.65, -4.35]	
Rizzo 2008	57	9	11	83	11	11	17.8%	-26.00 [-34.40, -17.60]	
Total (95% CI)			230				100.0%	-21.06 [-28.39, -13.74]	
Heterogeneity: Tau² = 60.21 Test for overall effect: Z = 5.			'= 6 (P	= 0.003	3); I² = 7	0%			-50 -25 0 25 50 Favours (pre-op IVB) Favours (No IVB)
	Pre	e-op IVB		,	lo IVB			Mean Difference	Mean Difference
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% Cl	IV, Random, 95% Cl
Arevalo 2019 di Lauro 2010	71.3 67	32.1 19.45	102 48	83.6 84	38.7 12	112 24	16.1% 19.9%	-12.30 [-21.80, -2.80] -17.00 [-24.30, -9.70]	
El-Batarny 2008 Faisal 2018	61.6 64.1	14.5 10.35	15 28	93.3 80.5	11.6 10.22	15 28	0.0%	-31.70 [-41.10, -22.30] -16.40 [-21.79, -11.01]	<b>_</b>
Hernandez-Da Mota 2010	62	31	20	98	35	20	5.9%	-36.00 [-56.49, -15.51]	
Manabe 2015 Modarres 2009	49 62	20 57.3	32 22	56 95.5	27 36	34 18	13.3% 3.2%	-7.00 [-18.42, 4.42] -33.50 [-62.65, -4.35]	
Rizzo 2008	57	9	11	83	11	11	17.9%	-26.00 [-34.40, -17.60]	
Total (95% Cl)	5 Ob7	12.00	263	- 0.00	12- 50	247	100.0%	-18.04 [-23.56, -12.51]	◆ ,
Heterogeneity: Tau <sup>2</sup> = 25.96 Test for overall effect: Z = 6.			– o (P	– u.U5)	,1 = 53	10			-50 -25 0 25 50 Favours (pre-op IVB) Favours (No IVB)
		e-op IVB			lo IVB			Mean Difference	Mean Difference
Study or Subgroup Arevalo 2019	Mean 71.3			Mean 83.6	SD 38.7	Total 112	Weight 17.0%	IV, Random, 95% Cl -12.30 [-21.80, -2.80]	IV, Random, 95% Cl
di Lauro 2010	67	19.45	48	84	12	24	19.0%	-17.00 [-24.30, -9.70]	
El-Batarny 2008 Faisal 2018	61.6 64.1	14.5 10.35	15 28	93.3 80.5	11.6 10.22	15 28	17.1% 0.0%	-31.70 [-41.10, -22.30] -16.40 [-21.79, -11.01]	
Hernandez-Da Mota 2010 Manabe 2015	62 49	31 20	20 32	98 56	35 27	20 34	8.6% 15.2%	-36.00 [-56.49, -15.51] -7.00 [-18.42, 4.42]	
Modarres 2009	62	57.3	22	95.5	36	18	5.2%	-33.50 [-62.65, -4.35]	
Rizzo 2008	57	9	11	83	11	11	18.0%	-26.00 [-34.40, -17.60]	
Total (95% Cl) Heterogeneity: Tau² = 64.13			250				100.0%	-21.30 [-28.86, -13.75]	•
	3; Chi² = 1	19.18, df	= 6 (P	= 0.004	i); l <sup>2</sup> = 6	9%			
			'= 6 (P	= 0.004	l); l² = 6	9%			-50 -25 0 25 50 Favours [pre-op IVB] Favours [No IVB]
Test for overall effect: Z = 5.	53 (P < 0 Pre	).00001) e- <b>op IVB</b>		,	ło IVB		Moight	Mean Difference	Favours [pre-op IVB] Favours [No IVB] Mean Difference
Test for overall effect: Z = 5. Study or Subgroup Arevalo 2019	53 (P < 0	0.00001) e-op IVB SD 32.1	Total 102	Mean 83.6		Total 112	Weight 14.9%	IV, Random, 95% Cl -12.30 [-21.80, -2.80]	Favours (pre-op IVB) Favours (No IVB)
Test for overall effect: Z = 5. Study or Subgroup Arevalo 2019 di Lauro 2010	53 (P < 0 Pro <u>Mean</u> 71.3 67	0.00001) e-op IVB SD 32.1 19.45	Total 102 48	Mean 83.6 84	lo IVB SD 38.7 12	Total 112 24	14.9% 17.6%	V, Random, 95% Cl -12.30 [-21.80, -2.80] -17.00 [-24.30, -9.70]	Favours [pre-op IVB] Favours [No IVB] Mean Difference
Testfor overall effect: Z = 5. Study or Subgroup Arevalo 2019 di Lauro 2010 E-Batany 2008 Faisal 2018	53 (P < 0 Pro Mean 71.3 67 61.6 64.1	0.00001) e-op IVB SD 32.1 19.45 14.5 10.35	Total 102 48 15 28	Mean 83.6 84 93.3 80.5	lo IVB SD 38.7 12 11.6 10.22	Total 112 24 15 28	14.9% 17.6% 15.0% 19.9%	V, Random, 95% Cl -12.30 [-21.80, -2.80] -17.00 [-24.30, -9.70] -31.70 [-41.10, -22.30] -16.40 [-21.79, -11.01]	Favours [pre-op IVB] Favours [No IVB] Mean Difference
Test for overall effect: Z = 5. Study or Subgroup Arevalo 2019 di Lauro 2010 EI-Batarny 2008 Faisal 2018 Hernandez-Da Mota 2010 Manabe 2015	53 (P < 0 Pro Mean 71.3 67 61.6 64.1 62 49	0.00001) e-op IVB 32.1 19.45 14.5 10.35 31 20	Total 102 48 15 28 20 32	Mean 83.6 84 93.3 80.5 98 56	lo IVB SD 38.7 12 11.6 10.22 35 27	Total 112 24 15 28 20 34	14.9% 17.6% 15.0% 19.9% 0.0% 12.8%	V, Random, 95% Cl -12.30 [-21.80, -2.80] -17.00 [-24.30, -9.70] -31.70 [-41.10, -22.30] -16.40 [-21.79, -11.01] -36.00 [-56.49, -15.51] -7.00 [-18.42, 4.42]	Favours [pre-op IVB] Favours [No IVB] Mean Difference
Test for overall effect: Z = 5. Study or Subgroup Arevalo 2019 di Lauro 2010 El-Batarny 2008 Faisal 2018 Hernandez-Da Mota 2010 Manabe 2015 Modarres 2009	53 (P < 0 Pro Mean 71.3 67 61.6 64.1 62 49 62	0.00001) e-op IVB 32.1 19.45 14.5 10.35 31 20 57.3	Total 102 48 15 28 20 32 22	Mean 83.6 84 93.3 80.5 98 56 95.5	lo IVB SD 38.7 12 11.6 10.22 35 27 36	Total 112 24 15 28 20 34 18	14.9% 17.6% 15.0% 19.9% 0.0% 12.8% 3.6%	V, Random, 95% Cl -12.30 [-21.80, -2.80] -17.00 [-24.30, -9.70] -31.70 [-41.10, -22.30] -16.40 [-21.79, -11.01] -36.00 [-56.49, -15.51] -7.00 [-18.42, 4.42] -33.50 [-62.65, -4.35]	Favours [pre-op IVB] Favours [No IVB] Mean Difference
Test for overall effect: Z = 5. Study or Subgroup Arevalo 2019 di Lauro 2010 El-Batarny 2008 Faisal 2018 Hernandez-Da Mota 2010 Manabe 2015 Modarres 2009 Rizzo 2008	53 (P < 0 Pro Mean 71.3 67 61.6 64.1 62 49	0.00001) e-op IVB 32.1 19.45 14.5 10.35 31 20	Total 102 48 15 28 20 32 22 21 11	Mean 83.6 84 93.3 80.5 98 56	lo IVB SD 38.7 12 11.6 10.22 35 27	Total 112 24 15 28 20 34 18 11	14.9% 17.6% 15.0% 19.9% 0.0% 12.8% 3.6% 16.2%	V, Random, 95% Cl -12.30 [-21.80, -2.80] -17.00 [-24.30, -9.70] -31.70 [44.10, -22.30] -16.40 [-21.79, -11.01] -36.00 [-56.49, -15.51] -7.00 [-18.42, 4.42] -33.50 [-62.65, -4.35] -26.00 [-34.40, -17.60]	Favours [pre-op IVB] Favours [No IVB] Mean Difference
Test for overall effect Z = 5. Study or Subgroup Arevalo 2019 di Lauro 2010 El-Batamy 2008 Faisal 2018 Hernandez-Da Mota 2010 Manabe 2015 Modares 2009 Rizzo 2008 Total (95% C1) Heterogeneity-Tau <sup>z</sup> = 39.88	53 (P < 0 Pro Mean 71.3 67 61.6 64.1 62 49 62 57 9; Chi <sup>a</sup> =	0.00001) e-op IVB 32.1 19.45 14.5 10.35 31 20 57.3 9 17.93, df	Total 102 48 15 28 20 32 22 11 258	Mean 83.6 84 93.3 80.5 98 56 95.5 83	lo IVB 38.7 12 11.6 10.22 35 27 36 11	Total 112 24 15 28 20 34 18 11 242	14.9% 17.6% 15.0% 19.9% 0.0% 12.8% 3.6% 16.2%	V, Random, 95% Cl -12.30 [-21.80, -2.80] -17.00 [-24.30, -9.70] -31.70 [-41.10, -22.30] -16.40 [-21.79, -11.01] -36.00 [-56.49, -15.51] -7.00 [-18.42, 4.42] -33.50 [-62.65, -4.35]	Favours [pre-op /VB] Favours [No r/B] Mean Difference IV, Random, 95% Cl 
Test for overall effect Z = 5. Study or Subgroup Arevalo 2019 di Lauro 2010 El-Batamy 2008 Faisal 2018 Hernandez-Da Mota 2010 Manabe 2015 Modares 2009 Rizzo 2008 Total (95% C1) Heterogeneity-Tau <sup>z</sup> = 39.88	53 (P < 0 Pro Mean 71.3 67 61.6 64.1 62 49 62 57 9; Chi <sup>a</sup> =	0.00001) e-op IVB 32.1 19.45 14.5 10.35 31 20 57.3 9 17.93, df	Total 102 48 15 28 20 32 22 11 258	Mean 83.6 84 93.3 80.5 98 56 95.5 83	lo IVB 38.7 12 11.6 10.22 35 27 36 11	Total 112 24 15 28 20 34 18 11 242	14.9% 17.6% 15.0% 19.9% 0.0% 12.8% 3.6% 16.2%	V, Random, 95% Cl -12.30 [-21.80, -2.80] -17.00 [-24.30, -9.70] -31.70 [44.10, -22.30] -16.40 [-21.79, -11.01] -36.00 [-56.49, -15.51] -7.00 [-18.42, 4.42] -33.50 [-62.65, -4.35] -26.00 [-34.40, -17.60]	Favours [pre-op IVB] Favours [No IVB] Mean Difference
Test for overall effect: Z = 5.  Study of Subgroup  Arevalo 2019  di Lauro 2010 E-Batarny 2000 Faisal 2018 Herrandez-Da Nota 2010 Manabe 2015 Modarres 2009 Ritzo 2008 Total (95% CI) Heterogeneity: Tau <sup>2</sup> = 39.88 Test for overall effect: Z = 6.	53 (P < 0 Pro Mean 71.3 67 61.6 64.1 62 49 62 57 62 57 62 49 62 57 9; Chi <sup>2</sup> = - 24 (P < 0 Pro Pro Pro Pro Pro Pro Pro Pro	0.00001) e-op IVB 32.1 19.45 14.5 14.5 31 20 57.3 9 17.93, df 0.00001) e-op IVB	Total 102 48 15 28 20 32 22 11 258 = 6 (P	Mean 83.6 84 93.3 80.5 98 56 95.5 83 = 0.008	lo IVB <u>SD</u> 38.7 12 11.6 10.22 35 27 36 11 ); I <sup>2</sup> = 6 lo IVB	Total 112 24 15 28 20 34 18 11 242 7%	14.9% 17.6% 15.0% 19.9% 0.0% 12.8% 3.6% 16.2%	N, Randorn, 95% C1           -12 30 (-2180, -280)           -17 00 (-24 30, -970)           -31 70 (-41 10, -22.30)           -31 (-16 40 (-21.79, -11.01)           -36 00 (-56.49, -15.51)           -70 (-16 442, 4.42)           -26 00 (-54.46, -1.45.51)           -26 00 (-54.46, -1.45.61)           -26 00 (-54.46, -1.47.60)           -19.16 (-25.19, -13.14)           Mean Difference	Favours [pre-op /VB] Favours [No /VB] Mean Difference IV, Random, 95% Cl 
Test for overall effect Z = 5.           Study or Subgroup           Arevalo 2019           di Lauro 2010           Febatarny 2008           Faisal 2016           Herrandez-Da Mota 2010           Modares 2015           Modares 2009           Rizzo 2008           Total (95% C)           Heterogeneity, Tau* = 30 & 80           Test for overall effect. Z = 6.           Study or Subgroup           Arevalo 2019	53 (P < 0 Prov Mean 71.3 67 61.6 64.1 62 57 62 57 62 57 62 57 62 62 57 62 57 71 82 62 57 72 84 9 62 57 72 74 74 74 74 74 74 74 74 74 74	0.00001) e-op IVB SD 32.1 19.45 14.5 10.35 31 20 57.3 9 17.93, dt 0.00001) e-op IVB SD 32.1	Total 102 48 15 28 20 32 22 11 258 56 (P Total 102	Mean 83.6 84 93.3 80.5 98 56 95.5 83 = 0.000 Mean 83.6	lo IVB SD 38.7 12 11.6 10.25 27 36 11 ); I*= 6 lo IVB SD 38.7	Total 112 24 15 28 20 34 18 11 242 7% Total 112	14.9% 17.6% 15.0% 19.9% 0.0% 12.8% 3.6% 16.2% 100.0% Weight 15.9%	N, Randorn, 95% CI           -12 30 12-18 80, -2.803           -17 00 12-4.30, -9.701           -317 10 14-11 02-22.303           -16 40 15-21 70, -11 0011           -36 00 156 49, -15.511           -7 00 118 42, 4.421           -33 50 162.05, -4.351           -20 00 12-44.04, -17.601           -19.16 [-25.19, -13.14]           Mean Difference           V, Random, 95% CI           -12.30 [-21.80, -2.800, -2.80]	Favours [pre-op VB] Favours [No rVB] Mean Difference N, Random, 95% Cl 
Test for overall effect. Z = 5. Study or Subgroup Arevalo 2019 di Lauro 2010 El-Batany 2000 El-Batany 2000 Hernandez-Da Mota 2010 Manabe 2015 Motares 2009 Rizzo 2009 Total (95% CI) Heterogenetic, Tau" = 39.85 Test for overall effect. Z = 6. Study or Subgroup Arevalo 2019 di Lauro 2010	53 (P < 0 Mean 71.3 67 61.6 64.1 62 49 62 57 9; Chi <sup>2</sup> = - 24 (P < 0 Pro- Mean	0.00001) e-op IVB SD 32.1 19.45 14.5 10.35 31 20 57.3 9 17.93, dt 10.00001) e-op IVB SD	Total 102 48 15 28 20 32 22 11 258 = 6 (P Total	Mean 83.6 84 93.3 80.5 98 56 95.5 83 = 0.006 Mean	lo IVB SD 38.7 12 11.6 10.22 35 27 36 11 36 11 35 27 36 11 36 10 27 36 11 36 10 27 36 11 36 10 27 36 10 36 36 10 27 36 36 36 36 36 36 36 36 36 36	Total 112 24 15 28 20 34 18 11 242 7% 7%	14.9% 17.6% 15.0% 19.9% 0.0% 12.8% 3.6% 16.2% 100.0%	M, Randorn, 95% CI           -12 30 12:18 (0 280)           -17 00 12:4 30 970)           -17 00 12:4 30 970)           -17 00 14:10 - 22.30)           -16 40 12:17 (0. +10:11)           -36 50 16:5.05, -4.35]           -26 00 12:44, -4.42]           -33 50 16:2.05, -4.35]           -26 00 12:44, -4.42]           -32 50 10:12:44, -4.42]           -26 00 12:44, -4.42]           -26 00 12:44, -4.42]           -26 00 12:44, -4.42]           -26 00 12:44, -4.42]           -38 00 16:26, -4.35]           -19 16 12:52, -19, -13.14]           Mean Difference           V, Random, 95% CI           -12.30 (2:13 00, -2.80)           -17.00 (2:4.30, -8.70)           -17.00 (2:4.30, -8.70)           -17.00 (2:4.30, -8.70)	Favours [pre-op /VB] Favours [No /VB] Mean Difference IV, Random, 95% Cl 
Test for overall effect: Z = 5.           Study or Subgroup           Arevalo 2019           di Lauro 2010           EHBatny 2008           Fasal 2013           Hernandez-Da Nota 2010           Manabe 2015           Manabe 2015           Notarres 2009           Rizzo 2008           Total (95% CI)           Hertandre, Tau" = 39.85           Test for overall effect: Z = 6.           Study or Subgroup           Arevalo 2019           di Lauro 2010           EHBatny 2008           EHBatny 2018	53 (P < 0 Provember 2012) 71.3 67. 61.6 64.1 62. 49. 62. 57. 24 (P < 0 Provember 2012) 24 (P < 0 Provember 2012) 71.3 67. 67. 61.6 64.1 62. 57. 57. 57. 57. 57. 57. 57. 57	0.00001) e-op IVB SD 32.1 19.45 14.5 10.35 31 20 57.3 9 17.93, dt 0.00001) e-op IVB SD 32.1 19.45 14.5 10.35	Total 102 48 20 32 22 11 258 5 = 6 (P Total 102 48 15 28 20 32 22 11 258 258 20 32 22 11 258 26 27 28 20 32 22 21 25 25 26 26 27 27 27 27 27 27 27 27 27 27	Mean 83.6 84 93.3 80.5 98 6 95.5 83 95.5 83 83 83 83 83 83 83 83 83 83 83 83 83	lo IVB SD 38.7 12 11.6 10.22 35 27 36 11 10.22 35 27 36 11 10.22 35 27 36 11 10.22 35 27 36 11 10.22 35 27 36 11 10.22 35 11 10.22 11.6 10.22 10.	Total 112 24 15 28 20 34 18 11 242 7% Total 112 24 15 28	14.9% 17.6% 15.0% 19.9% 0.0% 12.8% 16.2% 100.0% 100.0% 15.9% 18.9% 16.0% 21.7%	IV, Randorn, 95% C1           -12 30 (-21 80, -2.80)           -17,00 (-24.30, -9.70)           -31 70 (+41.10, -22.30)           -64 0 (-21 78, -11.01)           -36 00 (-56.48, -15.51)           -36 00 (-56.48, -15.51)           -26 00 (-54.42, -14.20)           -26 00 (-54.42, -14.20)           -26 00 (-54.40, -17.60)           -19.16 (-25.59, -13.14)           Mean Difference           IV, Randorn, 95% C1           -1.30 (-21.80, -2.80)           -1.30 (-21.80, -2.80)           -1.70 (-14.30, -2.70)           -31.70 (-14.10, -22.30)           -31.70 (-14.10, -11.01)	Favours [pre-op /VB] Favours [No /VB] Mean Difference IV, Random, 95% Cl 
Test for overall effect: Z = 5.           Study or Subgroup           treval 0.2019           ti.auro 2010           Heatanny 2008           Heatanny 2008           Heatandez-Da Nota 2010           Hizzo 2008           Fotal (95% CI)           Hederogeneity: Tau" = 39.85           Fest for overall effect: Z = 6.           Study or Subgroup           Vervalo 2019           H. Jauro 2010           H-Batamy 2000           H-Batamy 2000           H-Batamy 2010           H-Batamy 2010     <	53 (P < 0 Provide the second	0.00001) e-op IVB 32.1 19.45 14.5 10.35 31 20 57.3 9 17.93, df 0.00001) e-op IVB SD 32.1 19.45 10.35 32.1 19.45 10.35 32.1 20 32.1 20 57.3 9 17.93, df 1.00001) e-op IVB SD 32.1 1.4.5 1.4.	Total 102 48 15 28 20 32 22 11 <b>258</b> <b>5</b> 6 (P <b>Total</b> 102 48 15 28 20 32 21 11 <b>258</b> <b>5</b> <b>26</b> <b>27</b> <b>27</b> <b>17</b> <b>27</b> <b>27</b> <b>27</b> <b>27</b> <b>27</b> <b>27</b> <b>27</b> <b>27</b> <b>27</b> <b>27</b> <b>27</b> <b>27</b> <b>27</b> <b>27</b> <b>27</b> <b>27</b> <b>27</b> <b>27</b> <b>27</b> <b>27</b> <b>27</b> <b>27</b> <b>27</b> <b>11</b> <b>10</b> <b>27</b> <b>27</b> <b>27</b> <b>11</b> <b>10</b> <b>27</b> <b>27</b> <b>27</b> <b>11</b> <b>10</b> <b>27</b> <b>27</b> <b>11</b> <b>10</b> <b>27</b> <b>27</b> <b>27</b> <b>11</b> <b>10</b> <b>27</b> <b>27</b> <b>11</b> <b>10</b> <b>27</b> <b>27</b> <b>11</b> <b>10</b> <b>27</b> <b>27</b> <b>11</b> <b>10</b> <b>27</b> <b>48</b> <b>15</b> <b>28</b> <b>28</b> <b>10</b> <b>11</b> <b>10</b> <b>28</b> <b>11</b> <b>10</b> <b>28</b> <b>11</b> <b>10</b> <b>28</b> <b>11</b> <b>10</b> <b>28</b> <b>11</b> <b>10</b> <b>28</b> <b>11</b> <b>10</b> <b>10</b> <b>28</b> <b>11</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>1</b>	Mean 83.6 84 93.3 80.5 98 56 95.5 83 98 56 83 83 83.6 83.6 84 93.3 80.5 98 85 6	lo IVB SD 38.7 12 11.6 10.22 35 35 27 36 11 10.22 37 36 11 10 27 36 11 10 27 36 11 10 27 36 11 10 27 36 11 10 27 36 11 10 27 36 11 10 10 27 36 11 10 10 27 36 10 10 10 10 10 10 10 10 10 10	Total 112 24 15 28 20 34 18 11 242 7% <b>Total</b> 112 24 15 28 20 34	14.9% 17.6% 15.0% 19.9% 12.8% 3.6% 16.2% 100.0% 15.9% 18.9% 16.0% 21.7% 6.5% 0.0%	IV, Randorn, 95% C1           -12 30 (-2180, -280)           -17,00 (-2430, -970)           -31 70 (-41,0, -2230)           -64 0 (-2178, -11,01)           -36 00 (-56,48, -15,51)           -26 00 (-56,43, -15,61)           -26 00 (-54,42, -142)           -26 00 (-24,56, -4,36)           -19,16 (-25,19, -13,14)           Mean Difference           17, 00 (-124,30, -9,70)           -17,00 (-24,30, -9,70)           -31,70 (-24,30, -9,70)           -31,70 (-14,10, -22,30)           -36,00 (-56,49, -15,51)           -36,00 (-56,49, -16,51)           -36,00 (-56,49, -16,51)           -31,70 (-14,42,4,24,24,24,24,24,24,24,24,24)	Favours [pre-op /VB] Favours [No /VB] Mean Difference IV, Random, 95% Cl 
Test for overall effect Z = 5. Study or Subgroup Arevalo 2019 di Lauro 2010 di Lauro 2010 E-Batarny 2008 Faisal 2018 Hernandez-Da Mota 2010 Manabe 2015 Modares 2009 Rizzo 2008 Total (95% C) Heterogeneity Tau <sup>2</sup> = 39.88 Test for overall effect Z = 6. Study or Subgroup Arevalo 2019 di Lauro 2010 Faisal 2018 Hernandez-Da Mota 2010 Manabe 2015 Mota 2015 Mota 2015 Mota 2015 Mota 2015 Mota 2015 Mota 2019	53 (P < 0 Pro Mean 71.3 67 61.6 64.1 62 49 62 57 24 (P < 0 Pro Mean 71.3 67 57 24 (P < 0 Pro Mean 71.3 67 61.6 64.1 62 57 81 61 62 65 65 65 65 65 65 65 65 65 65	0.00001) e-op IVB 32.1 19.45 10.35 31 20 57.3 9 17.93, dt 0.00001) e-op IVB SD 32.1 19.45 10.35 31	Total 102 48 15 28 20 32 22 11 258 5 = 6 (P Total 102 48 102 48 25 25 25 25 25 25 25 25 25 25	Mean           83.6         84           93.3         80.5           98         56           95.5         83           =         0.000           Mean         83.6           84.6         84           93.3         80.5           98.9         98.9	lo IVB SD 38.7 12 11.6 10.22 35 27 36 11 10 38.7 12 35 27 36 11 10 38.7 12 35 27 36 11 10 22 35 27 36 11 10 22 35 27 36 11 10 22 35 27 36 11 10 22 35 27 36 11 10 22 35 27 36 11 10 22 35 27 36 11 10 22 35 27 36 11 10 22 35 27 36 11 10 22 35 27 36 11 10 22 35 27 36 11 10 22 35 27 36 11 10 22 35 27 36 11 11 20 20 35 27 36 11 10 22 35 27 36 11 10 22 35 27 36 11 10 22 35 35 27 11 10 22 35 38.7 12 21 38.7 12 21 38.7 12 21 38.7 12 21 38.7 12 21 12 21 38.7 12 21 10 22 35 27 38.7 12 21 10 22 35 27 12 21 10 22 35 27 12 21 10 22 35 27 12 21 10 22 35 35 27 12 25 25 25 25 25 25 25 25 25 2	Total 112 24 15 28 20 34 18 11 242 7% Total 112 24 112 24 112 24 28 20 34 18 11 242 28 20 34 18 19 28 20 34 18 20 24 24 24 24 24 24 24 24 24 24	14.9% 17.6% 15.0% 19.9% 0.0% 12.8% 16.2% 100.0% 15.9% 18.9% 16.9% 18.9% 16.5% 0.0% 3.7%	M. Randorn, 95% CI           -12 30 12-18 (0, -2.80)           -17 00 12-4.30, -9.70)           -17 00 12-4.30, -9.70)           -31 70 14-11 0-22.30)           -16 40 12-17, -11.011           -33 50 162.65, -4.35)           -26 00 15-44.04, -17.60)           -19.16 [-25.19, -13.14]           Mean Difference           VK Random, 95% CI           -12.30 [-21.80, -2.80)           -17.00 [-2.30, -9.70]           -17.00 [-2.30, -15.11]	Favours [pre-op /VB] Favours [No /VB] Mean Difference IV, Random, 95% Cl 
Test for overall effect Z = 5.  Study or Subgroup  Arevalo 2019 di Lauro 2010 di Lauro 2010 E-Batarny 2008 Faisal 2018 Hernandez-Da Mota 2010 Manabe 2015 Modares 2009 Frotal (95% C) Heterogeneity Tau <sup>2</sup> = 39.88  Test for overall effect Z = 6.  Study or Subgroup Arevalo 2019 di Lauro 2010 Faisal 2018 Hernandez-Da Mota 2010 Manabe 2015 Mota 2010 Hernandez-Da Mota 2010 Manabe 2015 Modares 2009 Ritzo 2008 Ritzo 2008	53 (P < 0 Pro Mean 71.3 67. 61.6 64.1 62. 49 62. 57. 61.6 64.1 62. 49 62. 57. 61.6 64.1 62. 49. 62. 67. 61.6 64.1 62. 64.1 63.6 64.1 64.2 64.9 62. 64.7 61.6 64.1 62. 64.7 61.6 64.1 62. 64.7 61.6 64.1 62. 64.7 61.6 64.1 62. 64.7 61.6 64.1 62. 64.7 61.6 64.1 62. 64.7 61.6 64.1 62. 64.7 64.7 64.6 64.7 64.1 64.7 64	0.00001) 30.00001) 32.1 19.45 10.35 31 20 57.3 9 17.93, dt 10.00001) e-op IVB SD 32.1 19.45 10.35 31 19.45 10.35 31 19.45 10.35 31 19.45 10.35 31 10.45 10.35 32 10.45 10.35 10.45 1	Total 102 48 15 28 20 32 22 11 258 5 6 (P Total 102 48 15 28 20 11 258 20 12 25 22 21 11 258 20 22 22 11 258 20 22 22 21 11 258 20 20 22 21 11 258 20 20 20 21 20 20 21 20 20 21 20 20 20 20 20 20 20 20 20 20	Mean           83.6         84           93.3         80.5           98         56           93         3           95.5         83           83.6         84           93.3         80.5           98         84           93.3         80.5           98         86           95.5         55.5	lo IVB SD 38.7 12 11.6 10.22 35 27 36 11 10.22 35 27 36 11 10.22 35 27 36 11 10.22 35 27 36 11 10.22 35 38.7 36 11 10.22 35 36 11 10.22 35 36 11 10.22 35 36 11 10.22 35 36 11 10.22 35 36 11 10.22 35 36 11 10.22 35 11 10.22 35 11 10 10 10 10 10 10 10 10 10	Total 112 24 15 28 20 34 18 11 242 7% Total 112 24 15 28 20 34 112 244 15 28 20 34 112 24 15 28 20 34 112 24 20 34 112 24 28 20 34 112 28 20 34 112 28 20 34 112 28 20 34 112 28 20 34 112 28 20 34 112 28 28 20 34 112 28 28 20 34 112 28 28 28 20 34 112 28 28 28 20 34 112 24 24 24 26 28 28 20 34 112 24 24 24 24 24 24 24 24 24 2	14.9% 17.6% 15.0% 19.9% 0.0% 12.8% 3.6% 16.2% 100.0% 16.2% 100.0% 18.9% 16.0% 21.7% 6.5% 0.0% 3.7% 17.4%	M. Randorn, 95% CI           -12 30 12:18 (0 280)           -17 00 12:4 30, -9 70)           -17 10 14:1 (0 22.30)           -16 40 12:17, -11 011           -38 50 16:2.65, -4.351           -700 [18:42, 4.42]           -33 50 16:2.65, -4.351           -26 00 12:44.0, -17.601           -19.16 [-25.19, -13.14]           Mean Difference           M. Random, 95% CI           -12.30 [-218.00, -280]           -17.00 [-24.30, -870]           -17.00 [-24.30, -870]           -35.00 [-56.4, 15:1]           -700 [-14.42, 4.42]           -35.00 [-56.4, 15:51]           -700 [-14.42, 4.42]           -35.00 [-56.5, -4.36]           -35.00 [-56.4, 15:61]           -700 [-18.42, 4.42]           -35.00 [-56.5, -4.36]           -35.00 [-56.4, -17.60]	Favours [pre-op /VB] Favours [No /VB] Mean Difference IV, Random, 95% Cl 
Test for overall effect Z = 5.  Study or Subgroup  Arevalo 2019  di Lauro 2019  di Lauro 2010  El-Batamy 2008 Faisal 2018 Hernandez-Da Mota 2010 Manabe 2015 Modares 2009  Rizzo 2008  Total (95% C)  Heterogeneity Tau <sup>2</sup> = 39.81  di Lauro 2019  di Lauro 2010  El-Batamy 2008 Faisal 2018  Hernandez-Da Mota 2010  Manabe 2015 Modares 2009  Rizzo 2008  Total (95% C)  Heterogeneity Tau <sup>2</sup> = 36.07	53 (P < C Pr Mean 71.3 67 61.6 64.1 62.4 49 62 62 67 61.6 64.1 62 49 62 62 71.3 67 61.6 64.1 62 49 62 62 71.5 67 61.6 64.1 62 49 62 62 67 71.5 67 61.6 64.1 62 62 71.5 75 61.6 64.1 62 71.5 75 61.6 64.1 62 75 75 75 75 75 75 75 75 75 75	0.00001) e-op IVB 32.1 19.45 19.45 14.5 10.35 57.3 9 17.93, dt 10.00001) e-op IVB SD 32.1 19.45 10.45 31 20 57.3 9 32.1 19.45 10.35 57.3 9 32.1 19.45 10.35 57.3 9 19.45 10.35	Total 102 48 15 28 20 32 22 11 258 5 6 (P Total 102 48 15 28 20 32 22 11 102 48 15 5 8 20 32 22 11 102 25 11 102 25 11 102 25 11 102 25 11 102 102 102 102 102 102 102	Mean 83.6 84 93.3 80.5 83 83 83 83 83.6 98 83.6 84 93.3 80.5 98 84 95.5 83 80.5 83 83.6 84 93.3 80.5 83 83 83 83 83 83 83 83 83 83	<b>to IVB</b> <b>SD</b> 38.7 12 35 27 36 11 <b>10.22</b> 35 27 36 11 <b>10.22</b> 36 <b>11</b> <b>10.7</b> <b>27</b> 36 <b>11</b> <b>10</b> <b>11</b> <b>10</b> <b>10</b> <b>11</b> <b>10</b> <b>11</b> <b>10</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b> <b>11</b>	Total 112 24 15 20 34 18 11 242 7% Total 112 24 15 28 200 34 112 24 15 28 200 34 112 24 15 28 20 34 112 24 15 20 34 112 24 15 20 34 112 24 20 34 112 24 20 34 112 24 20 34 112 24 20 34 112 24 20 34 112 24 20 34 112 24 20 24 20 24 20 24 24 26 26 26 26 26 26 26 26 26 26	14.9% 17.6% 15.0% 19.9% 0.0% 12.8% 3.6% 16.2% 100.0% 16.2% 100.0% 18.9% 16.0% 21.7% 6.5% 0.0% 3.7% 17.4%	M. Randorn, 95% CI           -12 30 12-18 (No. 2-80)           -17 00 12-4 30, -9 70)           -17 00 12-4 30, -9 70)           -17 01 14-10 -22 30)           -16 40 12-179, -11 001           -36 00 156.4 49, -15 511           -36 00 156.4 49, -15 511           -26 00 154.4 0, -17 601           -19.16 [-25.19, -13.14]           Mean Difference           V, Random, 95% CI           -12.30 [-218 00, -280]           -17.00 [-24.30, -970]           -16 40 [-21.79, -11.01]           -36 00 [-56.4 (-15.11)           -700 [-18.42, 4.42]           -36 00 [-56.4 (-15.51)           -30 (-12.6 (-15.51)           -30 (-12.43, -15.51)           -700 [-18.42, 4.42]           -30 (-12.64, -15.51)           -30 (-12.64, -15.51)           -30 (-12.64, -15.51)           -30 (-12.64, -15.51)           -30 (-12.65, -13.51)	Favours [pre-op /VB] Favours [No /VB] Mean Difference IV, Random, 95% Cl 
Test for overall effect Z = 5.  Study or Subgroup  Arevalo 2019  di Lauro 2019  di Lauro 2010  El-Batamy 2008 Faisal 2018 Hernande2-Da Mota 2010 Manabe 2015 Modares 2009  Rizzo 2008  Total (95% C)  Heterogeneity Tau <sup>2</sup> = 39.81  di Lauro 2019  di Lauro 2010  El-Batamy 2008 Faisal 2018  Hernande2-Da Mota 2010  Manabe 2015 Modares 2009  Rizzo 2008  Total (95% C)  Heterogeneity Tau <sup>2</sup> = 36.07	$\begin{array}{c} 53 \ (P < C \\ \hline \mbox{Mean} \\ 71.3 \\ 67 \\ 71.3 \\ 67 \\ 61.6 \\ 64.1 \\ 62 \\ 49 \\ 62 \\ 57 \\ 75 \\ 77 \\ \hline \mbox{Mean} \\ 71.3 \\ 61.6 \\ 64.1 \\ 62 \\ 49 \\ 62 \\ 62 \\ 77 \\ 77 \\ Ch^2 = 12 \\ (P < C \\ 71 \\ 71 \\ 77 \\ 77 \\ 77 \\ \hline \mbox{Ch}^2 = 12 \\ (P < C \\ 71 \\ 71 \\ 71 \\ 71 \\ 71 \\ 71 \\ 71 \\ $	0.00001) 32.1 19.45 32.1 19.45 10.35 31 20 57.3 31 20 57.3 31 20 57.3 31 20 57.3 31 20 57.3 31 10.95 57.3 32.1 19.45 57.3 32.1 10.95 57.3 32.1 10.95 57.3 31 20 57.3 31 20 57.3 31 20 57.3 31 20 57.3 31 20 57.3 31 20 57.3 32 10.95 57.3 32.1 10.95 57.3 31.1 20.3 57.3 31.1 20.3 57.3 31.1 20.3 57.3 31.1 20.3 57.3 31.1 20.3 57.3 31.1 20.3 57.3 9 9 15.97, dt 0.0001)	Total 102 48 20 32 22 11 258 5 6 (P Total 102 48 15 28 20 32 22 11 102 5 6 (P 26 28 20 22 21 11 258 5 6 (P 28 20 22 21 11 258 26 27 27 27 27 27 27 27 27 27 27	Mean 83.6 84 95.5 98 56 95.5 83 = 0.000 Mean 83.6 84 93.3 98.5 93.8 95.5 83 = 0.01)	<b>lo IVB</b> <b>SD</b> 38.7 12 11.6 10.22 35 27 36 11 10.22 35 38.7 12 38.7 3 38.7 38.7 38.7 38.7 38.7 38.7 38.7 38.7 38.7 37.7 38.7 38.7 37	Total 112 24 15 20 34 18 11 242 7% Total 112 24 15 28 200 34 112 24 15 28 200 34 112 24 15 28 20 34 112 24 15 20 34 112 24 15 20 34 112 24 20 34 112 24 20 34 112 24 20 34 112 24 20 34 112 24 20 34 112 24 20 34 112 24 20 24 20 24 20 24 24 26 26 26 26 26 26 26 26 26 26	14.9% 17.6% 15.0% 19.9% 0.0% 12.8% 3.6% 16.2% 100.0% 16.2% 100.0% 18.9% 16.0% 21.7% 6.5% 0.0% 3.7% 17.4%	M. Randorn, 95% CI           -12 30 12:18 (0 280)           -17 00 12:4.30, -970)           -17 10 14:10 -22.30)           -18 40 12:179, -11 001           -36 00 15:64 49, -15511           -37 00 14:18 42, 4421           -28 00 15:44 49, -17.601           -19 16 [-25.19, -13.14]           Mean Difference           W, Random, 95% CI           -17.30 [-218, 0280]           -17.00 [-24.30, -970]           -35.00 [-54, 45]           -33.0 [-26, 56, -4.35]           -33.0 [-26, 56, -4.35]           -33.0 [-26, 56, -4.35]           -33.0 [-26, 56, -4.35]           -35.0 [-26, 56, -4.35]           -35.0 [-26, 56, -4.35]           -35.0 [-26, 56, -4.35]           -35.0 [-26, 56, -4.35]           -26.00 [-34.40, -17.60]           -21.488 [-27.91, -15.86]	Favours [pre-op NB] Favours [No IVB] Mean Difference N, Random, 95% Cl 
Test for overall effect Z = 5.  Study or Subgroup  Arevala 2019  di Lauro 2010  EHBatamy 2008  Felsal 2010  Hernandez-Da Nota 2010  Manabe 2015  Modarres 2009  Rizzo 2008  Total (95% C)  Heterogeneity, Tau <sup>≠</sup> = 38.07  Revala 2010  EHBatamy 2008  Fotal Colone  Hernandez-Da Nota 2010  Heterogeneity, Tau <sup>≠</sup> = 38.07  Rotzo 2009  Total (95% C)  Heterogeneity, Tau <sup>≠</sup> = 38.07  Test for overall effect Z = 7.	$\begin{array}{c} 53 \ (P < C \\ \hline \mbox{Mean} \\ 71.3 \\ 67 \\ 71.3 \\ 67 \\ 61.6 \\ 64.1 \\ 62 \\ 49 \\ 62 \\ 57 \\ 75 \\ 77 \\ \hline \mbox{Mean} \\ 71.3 \\ 61.6 \\ 64.1 \\ 62 \\ 49 \\ 62 \\ 62 \\ 77 \\ 77 \\ Ch^2 = 12 \\ (P < C \\ 71 \\ 71 \\ 77 \\ 77 \\ 77 \\ \hline \mbox{Ch}^2 = 12 \\ (P < C \\ 71 \\ 71 \\ 71 \\ 71 \\ 71 \\ 71 \\ 71 \\ $	0.00001) <b>seop IVB</b> <b>32</b> ,1 19,45 14,5 11,9,45 14,5 31 10,35 57,3 9 <b>17</b> ,93,dt1 19,45 <b>31</b> 17,93,dt1 19,45 <b>57</b> ,3 9 <b>32</b> ,1 19,45 <b>57</b> ,3 9 <b>32</b> ,1 19,45 <b>57</b> ,3 9 <b>32</b> ,1 19,45 <b>57</b> ,3 9 <b>57</b> ,3 <b>57</b> ,3 <b>57</b> ,3 <b>57</b> ,3 <b>57</b> ,3 <b>57</b> ,3 <b>57</b> ,3 <b>57</b> ,4 <b>57</b>	Total 102 48 20 32 22 11 258 26 (P Total 102 48 20 32 22 11 102 48 20 32 22 11 102 48 20 32 22 11 102 48 20 32 22 11 102 48 20 32 22 11 102 48 20 32 22 11 102 48 20 32 22 11 102 48 20 32 22 11 102 48 20 32 22 11 102 48 20 32 22 11 102 48 28 20 102 102 48 28 20 102 102 102 102 102 102 102	Mean 83.6 84 95.5 98 56 95.5 83 = 0.000 Mean 83.6 84 93.3 98.5 93.8 95.5 83 = 0.01)	lo IVB SD 38.7 12 11.6 10.22 35 27 36 11 10 10 38.7 12 36 11 10 10 27 36 11 10 27 36 11 10 27 36 11 10 27 36 11 10 27 36 11 10 27 36 11 10 27 36 11 10 27 36 11 10 10 10 10 10 10 10 10 10	Total 112 24 15 20 34 18 11 242 7% Total 112 24 15 28 200 34 112 24 15 28 200 34 112 24 15 28 20 34 112 24 15 20 34 112 24 15 20 34 112 24 20 34 112 24 20 34 112 24 20 34 112 24 20 34 112 24 20 34 112 24 20 34 112 24 20 24 20 24 20 24 24 26 26 26 26 26 26 26 26 26 26	14.9% 17.6% 17.6% 19.9% 0.0% 12.8% 3.6% 16.2% 100.0% 16.9% 16.0% 21.7% 0.0% 3.7% 17.4% 100.0%	M, Randorn, 95% C1           -12 30 (-2180, -2.80)           -17 00 (-24.30, -9.70)           -31 70 (-41.0, -22.30)           -16 40 [-21.79, -11.01]           -36 00 (-56.49, -15.51)           -7.00 (-19.42, 4.42)           -26 00 [-34.40, -17.60]           -26 00 [-34.40, -17.60]           -19.16 (-25.19, -13.14]           Mean Difference           V, Random, 95% C1           -12 30 (-21.80, -2.80)           -17 00 [-54.40, -9.70]           -17 00 [-54.40, -9.70]           -18 (-55.19, -13.14]           Mean Difference           V, Random, 95% C1           -12 30 (-21.80, -2.80)           -17 00 [-54.40, -9.70]           -18 (-55.19, -13.14]           Mean Difference           V, Random, 95% C1           -12 30 (-21.80, -2.80)           -17 (0.11 (-32.30)           -16 (-55.4, -4.32)           -20 (-15.44, -1.7.60)           -20 (-15.44, -1.7.60)           -21.88 [-27.91, -15.86]           Mean Difference	Favours [pre-op /VB] Favours [No I/B] Mean Difference N, Random, 95% Cl -50 -25 50 Favours [pre-op /VB] Favours [No I/B] Mean Difference N, Random, 95% Cl -50 -25 50 Favours [pre-op /VB] Favours [No I/B] Mean Difference
Test for overall effect: Z = 5.           Study or Subgroup           Arevalo 2019           di Lauro 2010           E-Belarmy 2008           Faisai 2018           Hernandez-Da Mota 2010           Manabe 2015           Modarres 2009           Rizzo 2008           Total (95% CI)           Heterogeneity: Tau* = 39.85           Test for overall effect: Z = 6.           Study or Subgroup           Arevalo 2019           di Lauro 2010           E-Balarmy 2008           Faisai 2013           Herenandez-Da Mota 2010           Modares 2009           Rizzo 2008           Total (95% CI)           Heterogeneity: Tau*= 36.07           Fest for overall effect: Z = 7.           Study or Subgroup           Test for overall effect: Z = 7.           Study or Subgroup           Arevalo 2019	53 (P < C Mean 71.3 71.3 67.7 61.6 64.1 62.2 64.1 62.2 67.7 71.3 67.7 71.3 67.7 71.3 67.7 71.3 64.1 62.2 9.7 71.3 67.7 71.3 64.1 62.2 77.7 71.3 64.1 62.2 77.7 71.3 77.7 71.3 77.7 71.3 77.7 71.3 77.7 71.3 77.7 71.3 77.7 71.3 77.7 71.3 77.7 71.3 77.7 71.3 77.7 71.3 77.7 71.3 77.7 71.3 77.7 71.3 77.7 71.3 77.7 77	0.00001) solution 50 32.1 19.45 14.5 10.35 31 20 3.2 17.93, dtt 10.35 57.3 9 17.93, dtt 10.35 13.5 15.3 15.3 15.3 15.3 15.3 15.3 15.5	Total 102 48 15 28 20 20 21 11 258 26 (P Total 102 48 20 22 21 11 102 48 20 22 21 11 102 48 20 22 21 11 102 48 20 20 21 21 258 28 20 20 21 21 258 28 20 20 20 21 21 258 28 20 20 20 21 21 258 28 20 20 20 20 20 20 20 20 20 20	Mean           83.6         84           93.3         80.5           98         56           95.5         83           =         0.000           Mean         83.6           98.5         83           =         0.001           Mean         83.6           83.6         83.8           80.5         83           98.6         83.6	lo IVB 38.7 12 11.6 10.22 35 27 36 11 11 ));   <sup>2</sup> = 6 SD 38.7 12 11.6 SD 38.7 12 11.6 SD 38.7 12 36 11 11 11 11 11 11 11 11 11 1	Total 112 24 15 28 34 18 11 242 7% Total 112 24 15 28 20 34 112 242 24 15 28 34 11 242 24 24 15 28 20 34 15 28 28 20 34 15 28 28 28 20 24 24 24 24 24 24 24 24 24 24	14.9% 17.6% 15.0% 19.9% 3.6% 12.8% 3.6% 16.2% 100.0% Weight 100.0% 10.0% Weight 100.0%	M, Randorn, 95% CI           -12 30 (-21 80, -2 80)           -17 00 (-24 30, -9 70)           -31 70 (-41 10, -22 30)           -64 0 (-21 79, -11 01)           -36 00 (-56 49, -15 51)           -70 (-16 44 2, 442)           -28 00 (-54 44, -17 80)           -28 00 (-54 44, -17 80)           -12 00 (-14 40, -17 80)           -19 16 (-25 19, -13 .14)           Mean Difference           V, Random, 95% CI           -12 30 (-21 80, -280)           -17 00 (-24 30, -9 70)           -18 00 (-54 44, -17 80)           -36 00 (-54 44, -15 51)           -33 50 (-52 65, -4 35)           -33 50 (-52 65, -4 35)           -26 00 (-34 40, -17 60)           -21 (-21 88 (-27 91, -15 66)           Mean Difference           W, Random, 95% CI           -12 30 (-21 80, -280)	Favours [pre-op NB] Favours [No IVB] Mean Difference N, Random, 95% Cl 
Test for overall effect Z = 5.           Study or Subgroup           Arevalo 2019           If Lavo 2010           Falsal 2010           Hernandez-Da Mota 2010           Manabe 2015           Modares 2009           Rizzo 2008           Total (95% CI)           Heterogenetry Tau* = 39.85           Test for overall effect Z = 6.           Study or Subgroup           Arevalo 2019           Af Lavo 2010           Ferst for overall effect Z = 6.           Study or Subgroup           Arevalo 2019           Af Lavo 2010           Ferst 2009           Faisal 2016           Herrandez-Da Mota 2010           Modares 2009           Rizzo 2008           Total (95% CI)           Heterogenetry Tau* = 36.07           Test for overall effect Z = 7.           Study or Subgroup           Arevalo 2013           Mota 2010           Festory 2010           External 2011           Arevalo 2013           Markey 2013           Markey 2013           Heterogenetry 2010           External 2010           Exterogenetry 2010           External 2010 <td>53 (P &lt; C Mean 71.3 67. 61.6 64.1 62. 99. 64.2 64.1 62. 97. 71.3 67. 71.3 71.3 71.3 71.3 71.3 71.3 71.3 71.3 71.3 71.3 71.3 71.3 71.5 71</td> <td>a         a           a         a         b           b         a         b         b           b         a         a         a         a           1         a</td> <td>Total 102 48 15 28 20 32 22 22 10 258 5 6 (P Total 102 48 8 22 21 102 48 15 28 29 22 11 246 6 (P Total 102 48 6 6 (P Total 102 48 6 (P 102 48 15 28 28 15 28 29 102 48 48 15 28 29 102 48 48 15 28 28 29 102 48 48 15 28 28 29 102 48 48 15 28 29 20 102 48 48 15 28 29 20 102 48 20 20 102 22 11 246 6 (P Total 102 246 102 102 102 102 102 102 102 102</td> <td>Mean           83.6           84           93.3           80.5           98           56           93           9           9           9           80.5           83           9           83.6           93.3           9</td> <td><b>io IVB</b> <b>SD</b> 38.7 12 11.6 10.22 35 27 36 11 <b>i</b> <b>i</b> 10.22 35 27 36 11 10.22 35 27 36 11 10.22 35 27 36 11 10.22 35 27 36 11 10.22 35 27 36 11 10.22 35 11 10.22 35 11 10.22 35 11 10.22 35 11 10.22 35 11 10.22 35 11 10.22 35 11 10.22 35 11 10.22 35 11 10.22 35 11 10.22 35 11 10.22 35 11 10.22 36 11 10.22 36 11 10.22 36 11 10.22 36 11 10.22 36 11 10.22 36 11 10.22 36 11 10.22 36 11 10.22 35 11 11 10.22 35 11 11 11 11 11 11 11 11 11 1</td> <td>Total 112 24 15 28 20 34 11 242 7% Total 112 28 20 34 112 24 15 28 20 34 11 242 24 15 28 20 34 112 24 112 24 15 28 20 34 112 24 20 34 112 24 26 26 26 28 20 28 28 20 34 112 28 28 20 34 112 28 28 20 34 112 28 28 20 34 112 28 28 20 34 112 28 28 28 20 34 112 28 28 28 20 34 112 28 28 28 20 34 112 28 28 28 20 34 112 28 28 28 20 34 112 28 28 28 20 34 112 28 28 28 20 34 112 28 28 20 34 112 28 28 20 34 112 28 28 20 34 112 28 28 20 34 112 212 24 112 24 112 24 24 112 24 24 112 24 112 24 24 112 24 112 24 112 24 112 24 112 24 112 24 112 24 112 24 112 24 112 24 112 24 112 24 112 24 112 112</td> <td>14.9% 17.6% 15.0% 19.9% 12.8% 3.6% 16.2% 100.0% Weight 15.9% 0.0% 3.7% 17.4% 0.0% 3.7% 17.4% 0.0% 14.6% 14.6% 14.7%</td> <td>M, Randorn, 95% CI           -12 30 (-21 80, -2 80)           -17 00 (-24 30, -9 70)           -31 70 (-41 10, -22 30)           -64 0 (-21 79, -11 01)           -36 00 (-56 49, -15 51)           -7 00 (-16 44, 24 42)           -26 00 (-54 44, -17 80)           -26 00 (-54 44, -17 80)           -12 00 (-16 40, -17 80)           -13 0 (-16 10, -25 19, -13 14)           Mean Difference           V, Random, 95% CI           -12 - 30 (-21 80, -280)           -17 00 (-24 30, -9 70)           -18 0 (-54 40, -17 60)           -33 50 (-52 65, -4 35)           -33 50 (-52 65, -4 35)           -33 50 (-52 65, -4 35)           -33 50 (-52 65, -4 35)           -33 50 (-52 65, -4 35)           -35 60 (-54 40, -17 60)           -21 88 (-27 91, -15 86)           Mean Difference           V, Random, 95% CI           V, Random, 95% CI           V, Random, 95% CI           V, 23 00 (-24 30, -280)           -17 00 (-24 30, -27 30)           -17 00 (-24 30, -27 30)           -17 00 (-24 30, -27 30)           -13 70 (-41 10, -22 30)</td> <td>Favours [pre-op /VB] Favours [No I/B] Mean Difference N, Random, 95% Cl -50 -25 50 Favours [pre-op /VB] Favours [No I/B] Mean Difference N, Random, 95% Cl -50 -25 50 Favours [pre-op /VB] Favours [No I/B] Mean Difference</td>	53 (P < C Mean 71.3 67. 61.6 64.1 62. 99. 64.2 64.1 62. 97. 71.3 67. 71.3 71.3 71.3 71.3 71.3 71.3 71.3 71.3 71.3 71.3 71.3 71.3 71.5 71	a         a           a         a         b           b         a         b         b           b         a         a         a         a           1         a	Total 102 48 15 28 20 32 22 22 10 258 5 6 (P Total 102 48 8 22 21 102 48 15 28 29 22 11 246 6 (P Total 102 48 6 6 (P Total 102 48 6 (P 102 48 15 28 28 15 28 29 102 48 48 15 28 29 102 48 48 15 28 28 29 102 48 48 15 28 28 29 102 48 48 15 28 29 20 102 48 48 15 28 29 20 102 48 20 20 102 22 11 246 6 (P Total 102 246 102 102 102 102 102 102 102 102	Mean           83.6           84           93.3           80.5           98           56           93           9           9           9           80.5           83           9           83.6           93.3           9	<b>io IVB</b> <b>SD</b> 38.7 12 11.6 10.22 35 27 36 11 <b>i</b> <b>i</b> 10.22 35 27 36 11 10.22 35 27 36 11 10.22 35 27 36 11 10.22 35 27 36 11 10.22 35 27 36 11 10.22 35 11 10.22 35 11 10.22 35 11 10.22 35 11 10.22 35 11 10.22 35 11 10.22 35 11 10.22 35 11 10.22 35 11 10.22 35 11 10.22 35 11 10.22 35 11 10.22 36 11 10.22 36 11 10.22 36 11 10.22 36 11 10.22 36 11 10.22 36 11 10.22 36 11 10.22 36 11 10.22 35 11 11 10.22 35 11 11 11 11 11 11 11 11 11 1	Total 112 24 15 28 20 34 11 242 7% Total 112 28 20 34 112 24 15 28 20 34 11 242 24 15 28 20 34 112 24 112 24 15 28 20 34 112 24 20 34 112 24 26 26 26 28 20 28 28 20 34 112 28 28 20 34 112 28 28 20 34 112 28 28 20 34 112 28 28 20 34 112 28 28 28 20 34 112 28 28 28 20 34 112 28 28 28 20 34 112 28 28 28 20 34 112 28 28 28 20 34 112 28 28 28 20 34 112 28 28 28 20 34 112 28 28 20 34 112 28 28 20 34 112 28 28 20 34 112 28 28 20 34 112 212 24 112 24 112 24 24 112 24 24 112 24 112 24 24 112 24 112 24 112 24 112 24 112 24 112 24 112 24 112 24 112 24 112 24 112 24 112 24 112 24 112 112	14.9% 17.6% 15.0% 19.9% 12.8% 3.6% 16.2% 100.0% Weight 15.9% 0.0% 3.7% 17.4% 0.0% 3.7% 17.4% 0.0% 14.6% 14.6% 14.7%	M, Randorn, 95% CI           -12 30 (-21 80, -2 80)           -17 00 (-24 30, -9 70)           -31 70 (-41 10, -22 30)           -64 0 (-21 79, -11 01)           -36 00 (-56 49, -15 51)           -7 00 (-16 44, 24 42)           -26 00 (-54 44, -17 80)           -26 00 (-54 44, -17 80)           -12 00 (-16 40, -17 80)           -13 0 (-16 10, -25 19, -13 14)           Mean Difference           V, Random, 95% CI           -12 - 30 (-21 80, -280)           -17 00 (-24 30, -9 70)           -18 0 (-54 40, -17 60)           -33 50 (-52 65, -4 35)           -33 50 (-52 65, -4 35)           -33 50 (-52 65, -4 35)           -33 50 (-52 65, -4 35)           -33 50 (-52 65, -4 35)           -35 60 (-54 40, -17 60)           -21 88 (-27 91, -15 86)           Mean Difference           V, Random, 95% CI           V, Random, 95% CI           V, Random, 95% CI           V, 23 00 (-24 30, -280)           -17 00 (-24 30, -27 30)           -17 00 (-24 30, -27 30)           -17 00 (-24 30, -27 30)           -13 70 (-41 10, -22 30)	Favours [pre-op /VB] Favours [No I/B] Mean Difference N, Random, 95% Cl -50 -25 50 Favours [pre-op /VB] Favours [No I/B] Mean Difference N, Random, 95% Cl -50 -25 50 Favours [pre-op /VB] Favours [No I/B] Mean Difference
Test for overall effect Z = 5.           Study or Subgroup           Arevalo 2019           di Lauro 2010           EHBatamy 2008           Falsal 2018           Hermandez Da Mota 2010           Mota 2015           Modares 2009           Rizzo 2008           Total (95% CI)           Heterogenetry, Tau <sup>≠</sup> = 39.60           Test for overall effect Z = 6.           Study or Subgroup           Arevalo 2019           di Lauro 2010           EHBatamy 2008           Total (95% CI)           Hernandez-Da Mota 2010           EHBatamy 2008           Total (95% CI)           Heterogenetry, Tau <sup>≠</sup> = 36.07           Test for overall effect Z = 7.           Study or Subgroup           Arevalo 2019           Heterogeneity, Tau <sup>≠</sup> = 36.07           Test for overall effect Z = 7.           Study or Subgroup           Arevalo 2019           Meande 2019           Gi Lauro 2010           EHBatamy 2008           Total (95% CI)           EHBatamy 2018           EHBatamy 2018           Herward 2019           Gi Lauro 2010           EHBatamy 2008 <t< td=""><td>53 (P &lt; C      Prr      Mean      71.3      71.3      71.3      71.3      71.3      71.3      71.3      71.3      Fore      24      Pr      Pre      Pre</td><td>0.00001) e-op/WB 32.1 19.45 31.1 19.45 11.5 10.35 31.1 20 57.3 9 17.93, dd 57.3 9 19.45 10.35 19.45 10.35 15.97, dd 0.00001) e-op/WB 50 32.1 19.45 10.35</td><td>Total 102 48 15 28 20 32 22 11 258 6 (P Total 102 48 105 28 20 32 211 102 48 105 28 20 11 102 48 105 28 20 11 102 48 10 20 20 20 11 102 48 10 20 20 20 20 11 102 48 105 28 20 20 20 20 11 102 48 20 20 20 20 11 102 48 20 20 20 20 20 20 20 20 20 20</td><td>Mean           83.6         84           93.3         80.5           98         96.5           93.3         80.5           94.9         95.5           83.8         56           99.5         98.3           99.6         98.3           99.6         98.3           99.6         99.5           99.7         98.3           99.8         99.6           99.9         99.5           99.8         99.6           99.8         99.6           99.9         99.6           99.9         99.6           99.8         99.6           99.8         99.6           99.8         99.6           99.8         99.6           99.8         99.6           99.8         99.6           99.8         99.6           99.8         99.6           99.8         99.6           99.8         99.6           99.8         99.6           99.8         99.6           99.8         99.6           99.8         99.7           99.8         99.7</td><td>lo IVB SD 38.7 12 11.6 10.22 35 27 36 11 10.22 37 36 11 10.22 27 36 11 10.22 27 36 11 10.22 27 36 11 10.22 27 36 11 10.22 27 36 11 10.22 27 36 11 10.22 27 36 11 10.22 27 36 11 10.22 27 36 11 10.22 27 36 11 10.22 27 36 11 10.22 27 36 11 10.22 27 36 11 10.22 27 36 11 10.22 27 36 11 10.22 27 36 11 10.22 27 36 11 10.22 27 38 11 10.22 27 38 11 10.22 27 38 11 10.22 27 38 11 10.22 27 36 11 10.22 27 36 11 11 10.22 27 36 11 11 10.22 27 36 11 11 10.22 27 36 11 11 10.22 27 36 11 11 10 10 27 36 11 11 10 10 10 10 10 10 10 10</td><td>Total 112 24 15 28 20 34 18 11 242 7% Total 112 24 15 28 20 34 112 24 15 28 20 34 112 24 24 5 28 20 34 112 24 20 34 112 24 20 34 112 24 20 24 20 24 20 24 20 24 20 24 20 24 20 24 20 24 20 24 20 24 20 24 20 24 20 24 20 24 24 26 26 26 28 20 24 26 26 26 26 26 26 26 26 26 26</td><td>14 9% 17 6% 17 5% 19 9% 19 9% 19 9% 19 9% 19 9% 19 9% 19 9% 10 0% Weightt 14 6% 14 6% 14 7% 19 0%</td><td>IV. Randorn, 95% C1           -12 30 (-21 80, -2.80)           -12 30 (-21 80, -2.80)           -17 00 (-24.30, -9.70)           -31 70 (-41.10, -22.30)           -64 0 (-21 78, -11.01)           -36 00 (-56.48, -15.51)           -26 00 (-54.42, 4.42)           -30 (-62.65, -4.35)           -26 00 (-34.40, -17.60)           -19.16 (-25.19, -13.141)           Mean Difference           17, 00 (-24.30, -9.70)           -17.00 (-24.30, -9.70)           -17.00 (-24.30, -9.70)           -17.00 (-24.30, -9.70)           -35.00 (-56.49, -15.51)           -10.0 (-24.30, -9.70)           -17.00 (-24.30, -9.70)           -36.00 (-56.49, -15.51)           -10.0 (-24.30, -9.70)           -17.00 (-24.30, -11.01)           -36.00 (-56.49, -15.51)           -36.00 (-56.49, -15.51)           -37.00 (-24.30, -17.60)           -28.00 (-34.40, -17.60)           -28.00 (-34.40, -17.60)           -28.00 (-34.40, -17.60)           -29.00 (-34.40, -17.60)           -20.00 (-34.40, -17.60)           -12.30 (-27.80, -28.00)           -17.00 (-24.30, -9.70)           -17.00 (-24.30, -9.70)           -17.00 (-24.30, -9.70)           -17.00 (-24.30,</td><td>Favours [pre-op /VB] Favours [No I/B] Mean Difference N, Random, 95% Cl -50 -25 50 Favours [pre-op /VB] Favours [No I/B] Mean Difference N, Random, 95% Cl -50 -25 50 Favours [pre-op /VB] Favours [No I/B] Mean Difference</td></t<>	53 (P < C      Prr      Mean      71.3      71.3      71.3      71.3      71.3      71.3      71.3      71.3      Fore      24      Pr      Pre	0.00001) e-op/WB 32.1 19.45 31.1 19.45 11.5 10.35 31.1 20 57.3 9 17.93, dd 57.3 9 19.45 10.35 19.45 10.35 15.97, dd 0.00001) e-op/WB 50 32.1 19.45 10.35	Total 102 48 15 28 20 32 22 11 258 6 (P Total 102 48 105 28 20 32 211 102 48 105 28 20 11 102 48 105 28 20 11 102 48 10 20 20 20 11 102 48 10 20 20 20 20 11 102 48 105 28 20 20 20 20 11 102 48 20 20 20 20 11 102 48 20 20 20 20 20 20 20 20 20 20	Mean           83.6         84           93.3         80.5           98         96.5           93.3         80.5           94.9         95.5           83.8         56           99.5         98.3           99.6         98.3           99.6         98.3           99.6         99.5           99.7         98.3           99.8         99.6           99.9         99.5           99.8         99.6           99.8         99.6           99.9         99.6           99.9         99.6           99.8         99.6           99.8         99.6           99.8         99.6           99.8         99.6           99.8         99.6           99.8         99.6           99.8         99.6           99.8         99.6           99.8         99.6           99.8         99.6           99.8         99.6           99.8         99.6           99.8         99.6           99.8         99.7           99.8         99.7	lo IVB SD 38.7 12 11.6 10.22 35 27 36 11 10.22 37 36 11 10.22 27 36 11 10.22 27 36 11 10.22 27 36 11 10.22 27 36 11 10.22 27 36 11 10.22 27 36 11 10.22 27 36 11 10.22 27 36 11 10.22 27 36 11 10.22 27 36 11 10.22 27 36 11 10.22 27 36 11 10.22 27 36 11 10.22 27 36 11 10.22 27 36 11 10.22 27 36 11 10.22 27 36 11 10.22 27 38 11 10.22 27 38 11 10.22 27 38 11 10.22 27 38 11 10.22 27 36 11 10.22 27 36 11 11 10.22 27 36 11 11 10.22 27 36 11 11 10.22 27 36 11 11 10.22 27 36 11 11 10 10 27 36 11 11 10 10 10 10 10 10 10 10	Total 112 24 15 28 20 34 18 11 242 7% Total 112 24 15 28 20 34 112 24 15 28 20 34 112 24 24 5 28 20 34 112 24 20 34 112 24 20 34 112 24 20 24 20 24 20 24 20 24 20 24 20 24 20 24 20 24 20 24 20 24 20 24 20 24 20 24 20 24 24 26 26 26 28 20 24 26 26 26 26 26 26 26 26 26 26	14 9% 17 6% 17 5% 19 9% 19 9% 19 9% 19 9% 19 9% 19 9% 19 9% 10 0% Weightt 14 6% 14 6% 14 7% 19 0%	IV. Randorn, 95% C1           -12 30 (-21 80, -2.80)           -12 30 (-21 80, -2.80)           -17 00 (-24.30, -9.70)           -31 70 (-41.10, -22.30)           -64 0 (-21 78, -11.01)           -36 00 (-56.48, -15.51)           -26 00 (-54.42, 4.42)           -30 (-62.65, -4.35)           -26 00 (-34.40, -17.60)           -19.16 (-25.19, -13.141)           Mean Difference           17, 00 (-24.30, -9.70)           -17.00 (-24.30, -9.70)           -17.00 (-24.30, -9.70)           -17.00 (-24.30, -9.70)           -35.00 (-56.49, -15.51)           -10.0 (-24.30, -9.70)           -17.00 (-24.30, -9.70)           -36.00 (-56.49, -15.51)           -10.0 (-24.30, -9.70)           -17.00 (-24.30, -11.01)           -36.00 (-56.49, -15.51)           -36.00 (-56.49, -15.51)           -37.00 (-24.30, -17.60)           -28.00 (-34.40, -17.60)           -28.00 (-34.40, -17.60)           -28.00 (-34.40, -17.60)           -29.00 (-34.40, -17.60)           -20.00 (-34.40, -17.60)           -12.30 (-27.80, -28.00)           -17.00 (-24.30, -9.70)           -17.00 (-24.30, -9.70)           -17.00 (-24.30, -9.70)           -17.00 (-24.30,	Favours [pre-op /VB] Favours [No I/B] Mean Difference N, Random, 95% Cl -50 -25 50 Favours [pre-op /VB] Favours [No I/B] Mean Difference N, Random, 95% Cl -50 -25 50 Favours [pre-op /VB] Favours [No I/B] Mean Difference
Test for overall effect: Z = 5.           Study or Subgroup           vervalo 2019           Lauro 2010           =Heatamy 2008           =alsal 2018           =detrogenety: Tau* = 39.05           Foot (95% C)           =idetrogenety: Tau* = 39.05           Fest for overall effect: Z = 6.           Study or Subgroup           vervalo 2010           =Heatamy 2008           Total (95% C)           =ideal 2018           =ideal 2018           =ideal 2019           =ideal 2018           Monabe 2010           =Heatamy 2008           Total (95% C)           =detrogeneity: Tau* = 36.07           Test for overall effect: Z = 7.           Study or Subgroup           Vervalo 2019           =it.auro 2010           =Heatamy 2008           =dial 2019           =it.auro 2010           =Heatamy 2010           =Heatamy 2010           =He	53 (P < C Prr Mean 71.3 67 51.6 64.1 62 49 92 24 (P < C Prr Mean 71.3 67 71.7 81.6 64.1 62 57 71.7 81.6 64.1 62 57 71.7 81.6 64.1 62 57 71.7 81.6 64.1 62 57 71.7 81.6 64.1 62 57 71.7 81.6 64.1 62 57 71.7 81.6 64.1 62 57 71.7 81.6 64.1 62 64.1 62 64.1 62 64.1 62 64.1 62 64.1 62 64.1 62 64.1 62 64.1 62 64.1 62 71.3 71.3 71.3 71.3 75 71.3 75 71.3 75 71.3 75 71.3 71.3 75 71.3 75 71.3 71.3 71.3 77 71.3 71.3 77 71.3 77 71.3 75 75 77 77 77 77 77 77 77 77	0.00001) e-op IVB SD 32.1 19.45 11.5 11.5 10.35 31.1 20 57.3 9 15.97, dtl 0.00001) e-op IVB SD 32.1 10.35 31.1 20 57.3 9 15.97, dtl 19.45 10.35 32.1 19.45 10.35 32.1 19.45 10.35 32.1 19.45 10.35 32.1 19.45 10.35 32.1 19.45 10.35 32.1 19.45 10.35 32.1 19.45 10.35 32.1 19.45 10.35 32.1 10.35 32.1 10.35 32.1 10.35 32.1 10.35 32.1 10.35 32.1 10.35 32.1 10.35 32.1 10.35 32.1 10.35 32.1 10.45 32.1 10.35 32.1 10.45 32.1 10.45 32.1 10.35 32.1 10.45 32.1 10.45 32.1 19.45 10.35 32.1 19.45 10.35 32.1 19.45 10.35 32.1 19.45 10.35 32.1 19.45 10.35 32.1 19.45 10.35 10.35 10.35 10.35 10.35 10.35 10.35 10.35 10.35 10.35 10.35 10.35 10.35 10.35 10.35 10.55 10.35 10.55 10.	Total 102 48 15 28 20 32 22 22 21 102 48 15 6 (P Total 102 48 55 28 202 21 102 48 55 28 202 22 11 102 48 55 28 20 20 22 22 22 11 102 48 55 28 20 20 22 22 22 22 22 22 22 22	Mean           83.6         84           93.3         83.6           98         56           98         96.5           83.6         83.6           98.8         84           93.3         80.6           95.5         83           96.5         83           80.6         84           93.3         80.6           98         83.6           83.6         84.9           83.6         84.9           83.6         84.9           83.6         84.9           83.6         84.9           83.6         84.9           83.6         84.9           83.6         84.9           83.6         84.9           83.6         84.9           83.6         84.9           83.6         84.9           83.6         84.9           83.6         84.9           83.6         84.9           83.6         84.9           83.6         84.9           83.6         84.9           84.9         84.9           85.6         84.9      <	lo IVB SD 38.7 12 11.6 235 27 36 11 10.22 35 27 36 11 10.22 35 27 12 11.6 SD 38.7 12 12 12 12 12 12 12 12 12 12	Total 112 24 15 28 20 34 111 242 24 15 28 20 34 112 24 15 28 20 34 112 24 15 28 20 34 112 24 24 20 34 15 28 20 34 15 28 20 34 15 28 20 28 20 28 28 20 28 28 20 28 28 20 28 28 20 28 28 28 28 20 28 28 28 28 28 28 28 28 28 28	14 9% 17 6% 17 6% 19 9% 19 9% 12 8% 10 0% 12 8% 10 0% 10 0% 10 0% 16 0% 12 8% 10 0% 10 0% 12 8% 10 0% 10	IV. Randorn, 95% C1           -12 30 (-21 80, -2.80)           -12 30 (-21 80, -2.80)           -17 00 (-24 30, -9.70)           -17 (-10 (-24 30, -9.70)           -17 (-10 (-24 30, -9.70)           -16 40 (-21 79, -11.01)           -36 00 (-56 49, -15.51)           -70 (-17 48 42, 442)           -36 00 (-56 44, -15.51)           -26 00 (-34 40, -17.60)           -19.16 (-25.19, -13.141)           Mean Difference           IV, Bandorn, 95% C1           -12 30 (-21 80, -2.80)           -17.00 (-24 30, -9.70)           -31 70 (-14 10, -22 30)           -30 (-56 44, -15.51)           -26 00 (-54 42, 442)           -30 (-56 42, -15.51)           -20 0 (-54 42, -14.30)           -20 0 (-54 42, -14.30)           -20 0 (-54 42, -14.30)           -30 (-24 30, -9.70)           -21 30 (-21 80, -2.80)           -12 30 (-21 80, -2.80)           -13 (-24 30, -9.70)           -14 (-10 (-24 30, -9.70)           -17 (0 (-24 30, -9.70)           -17 (-24 30, -9.70)           -17 (-24 30, -9.70)           -17 (-24 30, -9.70)           -17 (-10 (-24 30, -9.70)           -17 (-10 (-24 30, -9.70)           -17 (-24 30, -9.70)	Favours [pre-op /VB] Favours [No I/B] Mean Difference N, Random, 95% Cl -50 -25 50 Favours [pre-op /VB] Favours [No I/B] Mean Difference N, Random, 95% Cl -50 -25 50 Favours [pre-op /VB] Favours [No I/B] Mean Difference
Test for overall effect Z = 5. Study or Subgroup Arevalo 2019 di Lauro 2010 El-Batarny 2008 Faisal 2018 Hernandez-Da Mota 2010 Manabe 2015 Modares 2009 Rizzo 2008 Total (95% C) Heterogeneir, Tau <sup>2</sup> = 39.88 Test for overall effect Z = 6. Study or Subgroup Arevalo 2019 di Lauro 2010 Eaisal 2018 Hernandez-Da Mota 2010 Manabe 2015 Modares 2009 Rizzo 2008 Total (95% C) Heterogeneir, Tau <sup>2</sup> = 36.07 Test for overall effect Z = 7. Study or Subgroup Arevalo 2019 di Lauro 2010 Eaisal 2018 Hernandez-Da Mota 2010 Manabe 2015 Modares 2009 Rizzo 2008 Total (95% C) Heterogeneir, Tau <sup>2</sup> = 36.07 Test for overall effect Z = 7. Study or Subgroup Arevalo 2019 di Lauro 2010 E-E-Batarny 2008 Faisal 2018 Hernandez-Da Mota 2010 Manabe 2015 Modares 2018 Hernandez-Da Mota 2010 Manabe 2015 Modares 2019 Manabe 2015 Modares 2009	$\begin{array}{l} 53 \ (P < C \\ \hline P < T \\ \hline Mean \\ 71.3 \\ 67 \\ 161.6 \\ 64.1 \\ 62.4 \\ 99 \\ 62.5 \\ 77 \\ 161.6 \\ 64.1 \\ 62.4 \\ (P < C \\ P \\ \hline P \\ \hline Mean \\ 71.3 \\ 67 \\ 71.5 \\ 64.1 \\ 62.5 \\ 77 \\ ChP = - \\ 12 \ (P < C \\ P \\ P \\ \hline P \\ \hline Mean \\ 71.3 \\ 67 \\ 1.5 \\ 61.6 \\ 64.1 \\ 62.5 \\ 77 \\ 1.5 \\ 61.6 \\ 64.1 \\ 61.6 \\$	0.00001) scop IVB 32.1 19.45 119.45 119.57 119.5	Total 102 48 15 28 20 102 258 5 = 6 (P Total 102 48 15 28 20 102 48 15 28 20 11 258 28 20 102 102 48 102 25 26 102 102 102 102 102 102 102 102	Mean           83.6           83.8           84           93.3           80.5           98.8           98.3           80.6           95.5           83           80.6           98.8           98.9           96.5           83.6           84.9           96.5           83.6           84.9           96.5           83.8           96.5           83.8           96.5           83.8           96.5           83.8           96.5           83.3           80.5           83.8           80.4           93.3           80.5           83.8           84.9           98.8           98.8           80.6           81.6           82.6           83.8           83.8           83.6           98	lo IVB S0 38.7 12 11.6 35.7 36 11 10.22 355 27 36 11 38.7 12 355 27 36 11 38.7 12 36 27 36 11 10.22 36 38.7 12 10.22 35 37 38 11 10.22 35 38.7 12 10.22 35 38.7 12 10.22 35 36 11 10.22 36 11 10.22 36 11 10.22 36 11 10.22 36 11 10.22 11.6 10.22 11.6 10.22 11.6 10.22 11.6 10.22 11.6 10.22 11.6 10.22 11.6 10.22 11.6 10.22 11.6 10.22 11.6 10.22 11.6 10.22 11.6 10.22 11.6 10.22 11.6 10.22 11.6 10.22 11.6 10.22 11.6 10.22 11.6 11.7 10.22 11.6 10.22 11.6 11.7 11.2 11.6 10.22 11.6 10.22 11.6 10.22 11.1 11.6 10.22 11.1 11.6 10.22 11.1 11.6 10.22 11.1 11.6 10.22 11.1 11.6 10.22 11.6 11.1 11.6 10.22 10.6 10.22 10.6 10.22 10.6 10.22 10.6 10.22 10.6 10.22 10.6 10.22 10.5 10.22 10.5 10	Total 112 24 15 20 34 18 11 242 27% Total 112 24 15 28 20 34 18 11 228 % Total 112 24 15 28 20 34 112 24 15 28 20 34 18 112 24 20 34 18 112 24 20 34 18 112 24 20 34 18 112 24 24 26 26 26 26 26 26 26 26 26 26	14 9% 17 6% 17 5% 19 9% 19 9% 19 9% 19 9% 19 9% 12 8% 16 2% 10 0.0% Weight 15 9% 16 0% 21 7% 10 0.0% Weight 14 6% 14 6% 14 6% 14 6% 6.5% 19 0% 14 7% 19 0% 10 0	IV. Randorn, 95% CI           -12 30 (-2180, -2.80)           -17 00 (-24.30, -9.70)           -317 (0 (-41.10, -22.30)           -317 (0 (-41.10, -22.30)           -316 (0 (-51.42, 4.42)           -33.50 (-52.65, -4.35)           -20.00 (-54.40, -17.60)           -20.00 (-54.40, -17.60)           -19.16 (-25.19, -13.14)           Mean Difference           V, Random, 95% CI           -13.30 (-56.56, -4.35)           -36.00 (-54.42, -42.30, -8.70)           -17.00 (-24.30, -8.70)           -16.40 (-27.79, -11.01)           -30.50 (-56.44, -15.61)           -30.50 (-56.44, -15.61)           -30.50 (-56.44, -15.61)           -30.50 (-56.43, -15.61)           -20.00 (-34.40, -17.60)           -21.30 (-21.80, -2.80)           -12.30 (-21.80, -2.80)           -12.30 (-21.80, -2.80)           -17.00 (-24.30, -9.70)           -17.00 (-24.30, -9.70)           -17.00 (-24.30, -9.70)           -17.00 (-24.30, -2.80)           -17.00 (-24.30, -2.80)           -17.00 (-24.30, -4.70)           -17.00 (-24.30, -4.70)           -17.00 (-24.30, -4.70)           -17.00 (-24.30, -4.70)           -17.00 (-24.30, -4.70)           -17.00 (-24	Favours [pre-op /VB] Favours [No I/B] Mean Difference N, Random, 95% Cl -50 -25 50 Favours [pre-op /VB] Favours [No I/B] Mean Difference N, Random, 95% Cl -50 -25 50 Favours [pre-op /VB] Favours [No I/B] Mean Difference
Test for overall effect. Z = 5.  Study or Subgroup  Arevalo 2019 di Lauro 2010 Manabe 2015 Modares 2009 Rizzo 2008  Total (95% C) Heterogeneity Tau <sup>2</sup> = 39.85  Test for overall effect. Z = 6.  Study or Subgroup  Arevalo 2019 di Lauro 2010 E-Batarry 2008 Falsa 2019 Rizzo 2008  Total (95% C) Heterogeneity Tau <sup>2</sup> = 36.07  Test for overall effect. Z = 7.  Study or Subgroup  Arevalo 2019 di Lauro 2019 di Lauro 2019 Falsa 2019 Arevalo 2019 Arevalo 2019 Arevalo 2018 Rizzo 2008  Total (95% C) Heterogeneity Tau <sup>2</sup> = 36.07 Test for overall effect. Z = 7.  Study or Subgroup  Arevalo 2019 di Lauro 2010 E-Batarry 2008  Falsa 2019 Arevalo 2019	$\begin{array}{l} \mathbf{F}_{3}(\mathbf{p} < \mathbf{C} \\ \mathbf{P}_{4}(\mathbf{p} <$	0.00001) e-op IVB SD 32.1 14.5 11.5 11.5 10.35 31 20 57.3 9 17.93, dti 19.45 14.5 32.1 19.45 14.5 14.5 10.36 32.1 19.45 14.5 10.36 32.1 19.45 14.5 10.35 32.1 19.45 10.36 32.1 19.45 10.36 32.1 19.45 10.36 32.1 19.45 10.35 32.1 19.45 57.3 9 9 32.1 19.45 57.3 9 57.3 32.1 19.45 57.3 32.1 19.45 57.3 32.1 19.45 57.3 32.1 19.45 57.3 32.1 19.45 57.3 32.1 19.45 57.3 32.1 19.45 57.3 32.1 19.45 57.3 32.1 19.45 57.3 32.1 19.45 57.3 32.1 19.45 57.3 32.1 19.45 57.3 32.1 19.45 57.3 37.3 19.45 57.3 37.3 19.45 57.3 37.3 19.45 57.3 37.3 19.45 10.35 57.3 37.3 19.45 10.35 57.3 37.3 19.45 10.35	Total 102 48 15 28 20 32 22 11 258 5 6 (P Total 102 48 20 32 22 11 102 48 20 32 22 11 102 48 5 28 20 32 22 11 102 48 5 28 20 32 22 11 102 48 5 28 20 22 21 11 102 48 5 28 20 22 21 11 102 48 5 28 20 22 21 11 102 48 5 28 20 22 21 11 102 48 5 28 20 22 21 11 102 48 5 28 20 22 21 11 102 48 5 28 20 22 11 102 48 5 28 20 22 12 11 102 48 5 28 20 22 12 11 246 5 26 28 20 22 11 102 48 102 24 102 24 10 24 102 24 102 24 102 24 102 24 102 24 102 24 102 24 102 24 102 24 102 24 102 24 102 24 102 24 102 28 20 102 102 28 20 20 102 102 28 20 102 102 28 28 20 102 102 28 28 20 102 102 28 28 20 20 102 28 28 20 22 102 102 28 28 20 22 22 102 102 28 22 22 102 102 28 28 20 22 22 102 102 28 22 22 102 102 28 20 22 22 22 22 22 22 22 22 22	Mean           83.6           83.8           84           93.3           80.5           98           96.5           83           97.5           83           98           83.6           98           98.3           98.3           99.5           98           96.5           93.3           83.6           95.5           83           96.5           93.3           80.6           84           93.3           80.6           84           93.3           80.6           84           93.3           80.6           84           93.3           80.6           96.5           96.5	lo IVB S0 7 11.6 38.7 12. 11.6 27 36 11 11.2 27 36 11 38.7 12. 10.22 36 11 38.7 12. 10.22 36 11 10.22 36. 38.7 12 10.22 36. 38.7 12 36. 11 10.22 36. 37. 12 10.22 36. 37. 12 10.22 36. 37. 12 10.22 36. 37. 12 11.6 10.22 36. 37. 12 11.6 27. 36. 37. 12 11.6 27. 36. 37. 12 11.22 36. 37. 12 11.22 36. 37. 12 11.22 36. 37. 12 11.22 35. 37. 12 11.22 35. 37. 36. 37. 12 11.22 35. 37. 36. 37. 36. 37. 36. 37. 37. 36. 37. 36. 37. 36. 37. 36. 37. 37. 36. 37. 37. 37. 36. 37. 37. 37. 37. 37. 37. 37. 37	Total 112 24 155 28 20 34 18 11 242 24 17% Total 112 24 24 15 24 24 15 24 24 15 24 24 15 5 24 24 15 5 8 20 24 24 24 24 24 24 24 24 24 24	14.9% 17.6% 15.0% 19.9% 19.9% 19.9% 19.0% 19.0% 10.0% <b>Weight</b> 16.9% 16.9% 17.4% 100.0% <b>Weight</b> 14.6% 14.7% 10.9% 14.7% 6.5% 10.9% 12.8% 10.0% 15.9% 10.0% 15.9% 15.9% 16.9% 16.9% 17.5% 16.9% 16.9% 17.5% 16.9% 16.9% 17.5% 16.9% 17.4% 16.9% 16.9% 16.9% 17.4% 10.0% 16.9% 16.9% 16.9% 17.4% 10.0% 16.9% 16.9% 17.4% 10.0% 16.9% 16.9% 16.9% 16.9% 16.9% 17.4% 10.0% 16.9% 10.0% 10.	IV. Randorn, 95% CI           -12 30 (-2180, -2.80)           -17 00 (-24.30, -9.70)           -317 (0 (-41.10, -22.30)           -317 (0 (-41.10, -22.30)           -316 (0 (-51.42, 4.42)           -33.60 (-52.65, -4.35)           -20.00 (-54.40, -17.60)           -20.00 (-54.40, -17.60)           -12.30 (-21.80, -2.80)           -12.30 (-21.80, -2.80)           -17.00 (-24.30, -8.70)           -10.00 (-24.30, -8.70)           -33.60 (-56.44, -15.51)           -7.00 (-24.30, -8.70)           -10.2 (-21.80, -2.80)           -17.00 (-24.30, -8.70)           -26.00 (-34.40, -17.60)           -21.30 (-21.80, -2.80)           -17.00 (-24.30, -8.70)           -17.00 (-24.30, -9.70)           -12.30 (-21.80, -2.80)           -17.00 (-24.30, -9.70)           -35.00 (-56.4, -35)           -35.00 (-56.4, -35)           -35.00 (-26.80, -5.81)           -70.00 (-24.30, -7.00)           -21.30 (-21.80, -2.80)           -17.00 (-24.30, -8.70)           -17.00 (-24.30, -7.00)           -35.00 (-56.4, -55.41)           -35.00 (-56.4, -55.41)           -35.00 (-56.4, -56.41)           -70.00 (-18.42, 44.2)           -35.00 (-56.4, -56.41	Favours [pre-op /VB] Favours [No I/B] Mean Difference N, Random, 95% Cl -50 -25 50 Favours [pre-op /VB] Favours [No I/B] Mean Difference N, Random, 95% Cl -50 -25 50 Favours [pre-op /VB] Favours [No I/B] Mean Difference
Test for overall effect: Z = 5.  Study or Subgroup  vervalo 2019  di Lauro 2010  fotal (95% C)  deterogeneity. Tau <sup>2</sup> = 39.80  rotal (95% C)  deterogeneity. Tau <sup>2</sup> = 36.07  rota 2019  di Lauro 2010  li Lauro 2010  li Lauro 2010  li Lauro 2010  rotal (95% C)  deterogeneity. Tau <sup>2</sup> = 36.07  rotal 005% C)  deterogeneity. Tau <sup>2</sup> = 36.07  rest for overall effect: Z = 7.  Study or Subgroup  vervalo 2019  di Lauro 2010  El-Batamy 2008  arisal 2018  di Lauro 2010  di Lauro 2019  d	53 (P < C Pr Mean 71.3 87 81.6 64.1 62 49 9622 57 77 81.6 64.1 62 49 9622 57 77 81.6 64.1 62 49 9622 57 77 81.6 64.1 62 49 9622 57 77 81.6 64.1 62 49 9622 57 77 81.6 64.1 62 49 9622 57 77 81.6 64.1 62 49 9622 57 77 81.6 64.1 62 49 9622 57 77 81.6 64.1 62 49 962 62 62 62 97 71.3 87 87 87 87 87 87 87 87 87 87	0.00001) .00001) .00001) .00011 .0145	Total 102 48 55 28 20 11 258 20 222 11 102 48 16 20 32 222 11 102 48 16 20 32 222 11 102 48 102 48 102 48 102 102 102 102 102 102 102 102	Mean           83.6         84           93.3         80.5           98.5         56           95.5         83           98.6         84           93.3         80.5           98.6         84           93.3         80.5           98.6         84           93.3         80.5           99.6         83           99.6         83           99.6         83           99.6         83           99.6         83           99.6         83           99.6         83           99.6         84           99.7         83           99.6         83           99.6         84           99.7         83           99.8         96           93.3         80.5           99.8         96           99.5         83           99.6         83           90.5         83           91.6         93.3           92.6         93.3           93.7         93.3           93.3         93.3           93.3	lo IVB SD 38.7 12 36 11.6 10.22 36 11 10.22 36 11 38.7 12 36 10.22 36 11 10.22 36 11 11 (F=62 38.7 12 36 37 36 11 11 (F=62 38.7 12 36 37 36 11 11 (F=62 38.7 12 36 11 11 (F=62 38.7 12 36 11 11 (F=62 38.7 12 36 11 11 (F=62 38.7 12 36 11 11 (F=62 38.7 12 11 11 (F=62 38.7 12 11 11 11 11 11 11 11 11 11	Total 112 24 15 28 20 34 18 112 242 7% <b>Total</b> 112 24 28 20 34 18 11 <b>242</b> 28 20 34 18 112 28 20 34 112 24 15 28 20 34 112 24 12 24 20 34 112 24 20 34 18 112 24 20 20 20 20 20 20 20 20 20 20 20 20 20	14.9% 17.6% 15.0% 19.9% 19.9% 19.9% 19.0% 19.0% 10.0% <b>Weight</b> 16.9% 16.9% 17.4% 100.0% <b>Weight</b> 14.6% 14.7% 10.9% 14.7% 6.5% 10.9% 12.8% 10.0% 15.9% 10.0% 15.9% 15.9% 16.9% 16.9% 17.5% 16.9% 16.9% 17.5% 16.9% 16.9% 17.5% 16.9% 17.4% 16.9% 16.9% 16.9% 17.4% 10.0% 16.9% 16.9% 16.9% 17.4% 10.0% 16.9% 16.9% 17.4% 10.0% 16.9% 16.9% 16.9% 16.9% 16.9% 17.4% 10.0% 16.9% 10.0% 10.	IV. Randorn, 95% CI           -12 30 12:4 80, -2 803           -17 00 12:4 30, -9 701           -31 70 14:1 02:2 303           -31 70 14:1 02:2 303           -31 70 14:1 02:2 303           -17 10 14:1 02:2 303           -17 10 14:1 02:2 303           -33 50 16:2 05:5 - 4:351           -32 50 16:2 4:4 4:421           -33 50 16:2 05:5 - 4:351           -20 00 12:3 4:4 04:1 7:601           -12.30 12:1 300, -2800           -17 00 12:4 30, -9.701           -17 00 12:4 30, -9.701           -35 00 16:2 05:4 -351           -35 00 16:2 05:4 -351           -35 30 16:2 05:4 -351           -35 00 16:3 4:40, -17.601           -21.30 12:1 80; -27.91, -15.86]           Mean Difference           W, Random, 95% CI           -12.30 12:4 30, -9.701           -35 00 16:2 4:30, -9.701           -35 00 16:2 4:30, -9.701           -35 00 16:2 4:30, -9.701           -35 00 16:2 4:30, -9.701           -35 00 16:2 4:30, -9.701           -35 00 16:2 4:30, -9.701           -35 00 16:2 5:51           -30 00 15:6 4:30, -9.701           -30 00 15:6 4:30, -15.511           -70 00 17:4 4:2, 4:42           -35 00 16:5 5:4, -353	Favours [pre-op /VB] Favours [No I/B] Mean Difference N, Random, 95% Cl -50 -25 50 Favours [pre-op /VB] Favours [No I/B] Mean Difference N, Random, 95% Cl -50 -25 50 Favours [pre-op /VB] Favours [No I/B] Mean Difference
Test for overall effect Z = 5. Study or Subgroup Arevalo 2019 di Lauro 2010 El-Batarny 2008 Faisal 2018 Hernandez-Da Mota 2010 Manabe 2015 Modarres 2009 Rizzo 2008 Total (95% C) Heterogeneir, Tau <sup>2</sup> = 39.80 Total (95% C) Heterogeneir, Tau <sup>2</sup> = 39.80 Gi Lauro 2010 El-Batarny 2008 Faisal 2018 Hernandez-Da Mota 2010 Manabe 2015 Modarres 2009 Rizzo 2008 Total (95% C) Heterogeneir, Tau <sup>2</sup> = 36.07 Test for overall effect Z = 7. Study or Subgroup Arevalo 2019 di Lauro 2010 El-Batarny 2008 Faisal 2018 Heterogeneir, Tau <sup>2</sup> = 36.07 Test for overall effect Z = 7. Study or Subgroup Arevalo 2019 di Lauro 2010 El-Batarny 2008 Faisal 2018 Heterogeneir, Tau <sup>2</sup> = 36.07 Test for overall effect Z = 7. Study or Subgroup Arevalo 2019 di Lauro 2010 El-Batarny 2008 Faisal 2018 Hernandez-Da Mota 2010 Manabe 2015 Modares 2009 Rizzo 2009 R	53 (P < C Pr Mean 71.3 87 81.6 84.1 15.6 84.1 15.7 81.6 84.1 15.7 17.1	0.00001) .00001) .00001) .00011 .00011 .0105 .00001) .000010 .0000000 .0000000 .0000000 .0000000 .0000000 .0000000 .00000000	Total 102 48 105 28 20 32 22 22 102 48 5 6 (P Total 102 48 5 28 20 32 22 21 102 48 5 28 20 32 22 21 102 48 5 28 20 20 22 21 102 48 5 28 28 20 20 22 21 102 48 5 28 28 20 20 22 21 102 48 5 28 20 20 22 21 102 48 5 28 20 22 22 102 48 5 28 20 22 22 102 48 5 28 20 22 22 102 48 5 28 20 22 22 22 102 48 5 28 20 22 22 102 48 5 28 20 22 22 22 22 22 22 22 22 22	Mean           83.6         84           93.3         80.5           98         56           98.3         80.5           83.6         84           93.3         80.5           83.6         84           93.3         90.5           83.6         94           95.5         83           96.5         83           97.5         83.6           98.3         96.5           93.3         80.5           93.3         80.5           93.3         80.5           93.3         80.5           93.3         80.5           93.3         80.5           93.3         80.5           93.3         80.5           93.3         80.5           93.3         80.5           93.3         80.5           93.3         80.5           93.3         80.5           93.3         80.5           93.3         80.5           93.3         80.5           93.3         80.5           93.3         80.5           93.3         80.5	Image: bit with the second	Total 112 24 15 28 20 34 18 112 242 7% <b>Total</b> 112 24 28 20 34 18 11 <b>242</b> 28 20 34 18 112 28 20 34 112 24 15 28 20 34 112 24 12 24 20 34 112 24 20 34 18 112 24 20 20 20 20 20 20 20 20 20 20 20 20 20	14.9% 17.6% 15.0% 19.9% 19.9% 19.9% 19.0% 19.0% 10.0% <b>Weight</b> 16.9% 16.9% 17.4% 100.0% <b>Weight</b> 14.6% 14.7% 10.9% 14.7% 6.5% 10.9% 12.8% 10.0% 15.9% 10.0% 15.9% 15.9% 16.9% 16.9% 17.5% 16.9% 16.9% 17.5% 16.9% 16.9% 17.5% 16.9% 17.4% 16.9% 16.9% 16.9% 17.4% 10.0% 16.9% 16.9% 16.9% 17.4% 10.0% 16.9% 16.9% 17.4% 10.0% 16.9% 16.9% 16.9% 16.9% 16.9% 17.4% 10.0% 16.9% 10.0% 10.	IM, Randorn, 95% CI           -12 30 (-2180, -2.80)           -17 00 (-24.30, -9.70)           -17 (0) (-24.30, -9.70)           -17 (0) (-24.30, -9.70)           -17 (0) (-24.30, -9.70)           -17 (0) (-24.30, -9.70)           -17 (0) (-14.22, -3.350 (-62.65, -4.35)           -250 (0) (-24.40, -17.60)           -19.16 (-25.19, -13.14)           Mean Difference           V, Random, 95% CI           -12.30 (-21.30, -2.80)           -17.00 (-24.30, -8.70)           -10.00 (-24.30, -8.70)           -33.50 (-65.65, -4.35)           -26.00 (-34.40, -17.60)           -33.50 (-65.65, -4.36)           -26.00 (-34.40, -17.60)           -31.70 (+11.01, -22.30)           -12.30 (-21.80, -2.80)           -12.30 (-21.80, -2.80)           -12.30 (-21.80, -2.80)           -12.30 (-21.80, -2.80)           -12.30 (-21.80, -2.80)           -12.30 (-21.80, -2.80)           -12.30 (-21.80, -2.80)           -12.30 (-21.80, -2.80)           -13.70 (-14.10, -22.30)           -10.70 (-24.30, -9.70)           -10.70 (-24.30, -9.70)           -33.70 (-62.65, -4.35)           -35.00 (-62.65, -4.35)           -35.00 (-56.54, -4.35)           -26	Favours [pre-op NE] Favours [No IVB] Mean Difference N. Random, 95% CI -0 -0 -0 -0 -0 -0 -0 -0 -0 -0
Test for overall effect. Z = 5. Study or Subgroup Arevalo 2019 di Lauro 2010 EHBatamy 2008 EHBatamy 2008 EHBatamy 2008 Hermandez-Da Mota 2010 Manabe 2015 Modares 2009 Rizzo 2009 Ital (95% CI) Heterogeneity. Tau" = 38.82 Study or Subgroup Arevalo 2019 di Lauro 2010 EHBatamy 2008 Rizzo 2009 Rizzo 2	53 (P < C Pr Mean 71.3 87 81.6 84.1 15.6 84.1 15.7 81.6 84.1 15.7 17.1	0.00001) .00001) .00001) .0001 .0001 .0001 .0001 .00001) .000001) .00001)	Total 102 48 20 32 221 102 48 15 26 6 (P Total 102 48 15 222 11 246 5 6 (P Total 102 48 15 222 11 246 5 222 11 246 5 222 11 246 5 222 11 246 5 222 11 246 5 222 11 246 5 222 11 246 5 222 11 246 5 222 11 246 5 222 11 246 5 222 11 246 5 222 11 246 5 222 11 102 48 200 32 222 11 102 48 200 32 222 11 102 48 200 32 222 11 102 48 200 32 222 11 102 48 5 5 222 11 102 48 200 32 222 11 102 48 5 5 222 211 102 48 20 222 211 102 48 20 222 11 102 48 26 6 (P 102 22 22 11 102 246 5 5 222 22 11 102 246 5 5 222 22 11 102 246 5 5 222 222 11 10 246 5 5 222 222 11 25 26 22 222 11 25 26 22 222 11 25 26 22 22 22 11 25 26 22 22 22 11 25 26 22 22 22 22 11 25 26 22 22 22 11 25 26 22 22 22 22 11 25 26 22 22 22 11 25 26 22 22 22 22 11 25 25 22 22 22 11 25 25 25 25 25 25 25 25 25 25	Mean           83.6         84           93.3         80.5           98         56           98.3         80.5           83.6         84           93.3         80.5           83.6         84           93.3         90.5           83.6         94           95.5         83           96.5         83           97.5         83.6           98.3         96.5           93.3         80.5           93.3         80.5           93.3         80.5           93.3         80.5           93.3         80.5           93.3         80.5           93.3         80.5           93.3         80.5           93.3         80.5           93.3         80.5           93.3         80.5           93.3         80.5           93.3         80.5           93.3         80.5           93.3         80.5           93.3         80.5           93.3         80.5           93.3         80.5           93.3         80.5	lo IVB SD 38.7 12 36 11.6 10.22 36 11 10.22 36 11 38.7 12 36 10.22 36 11 10.22 36 11 11 (F=62 38.7 12 36 37 36 11 11 (F=62 38.7 12 36 37 36 11 11 (F=62 38.7 12 36 11 11 (F=62 38.7 12 36 11 11 (F=62 38.7 12 36 11 11 (F=62 38.7 12 36 11 11 (F=62 38.7 12 11 11 (F=62 38.7 12 11 11 11 11 11 11 11 11 11	Total 112 24 15 28 20 34 18 112 242 7% <b>Total</b> 112 24 28 20 34 18 11 <b>242</b> 28 20 34 18 112 28 20 34 112 24 15 28 20 34 112 24 12 24 20 34 112 24 20 34 18 112 24 20 20 20 20 20 20 20 20 20 20 20 20 20	14.9% 17.6% 15.0% 19.9% 19.9% 19.9% 19.0% 19.0% 10.0% <b>Weight</b> 16.9% 16.9% 17.4% 100.0% <b>Weight</b> 14.6% 14.7% 10.9% 14.7% 6.5% 10.9% 12.8% 10.0% 15.9% 10.0% 15.9% 15.9% 16.9% 16.9% 17.5% 16.9% 16.9% 17.5% 16.9% 16.9% 17.5% 16.9% 17.4% 16.9% 16.9% 16.9% 17.4% 10.0% 16.9% 16.9% 16.9% 17.4% 10.0% 16.9% 16.9% 17.4% 10.0% 16.9% 16.9% 16.9% 16.9% 16.9% 17.4% 10.0% 16.9% 10.0% 10.	IV. Randorn, 95% CI           -12 30 (-2180, -2.80)           -17 00 (-24.30, -9.70)           -317 (0 (-41.10, -22.30)           -317 (0 (-41.10, -22.30)           -316 (0 (-51.42, 4.42)           -33.60 (-52.65, -4.35)           -20.00 (-54.40, -17.60)           -20.00 (-54.40, -17.60)           -12.30 (-21.80, -2.80)           -12.30 (-21.80, -2.80)           -17.00 (-24.30, -8.70)           -10.00 (-24.30, -8.70)           -33.60 (-56.44, -15.51)           -7.00 (-24.30, -8.70)           -10.2 (-21.80, -2.80)           -17.00 (-24.30, -8.70)           -26.00 (-34.40, -17.60)           -21.30 (-21.80, -2.80)           -17.00 (-24.30, -8.70)           -17.00 (-24.30, -9.70)           -12.30 (-21.80, -2.80)           -17.00 (-24.30, -8.70)           -35.00 (-56.4, -35)           -35.00 (-56.4, -35)           -35.00 (-26.80, -5.81)           -70.00 (-24.30, -7.00)           -21.30 (-21.80, -2.80)           -17.00 (-24.30, -8.70)           -17.00 (-24.30, -7.00)           -35.00 (-56.4, -55.41)           -35.00 (-56.4, -55.41)           -35.00 (-56.4, -56.41)           -70.00 (-18.42, 44.2)           -35.00 (-56.4, -56.41	Favours [pre-op NB] Favours [No IVB] Mean Difference N. Random, 95% C1 
Test for overall effect Z = 5.           Study or Subgroup           Arevalo 2019           di Lauro 2010           EHBatamy 2008           EHBatamy 2008           Hernandez-Da Nota 2010           Manabe 2015           Manabe 2015           Notares 2009           Rizzo 2009           Rizzo 2009           Fastal (95% CI)           Hernandez-Da Nota 2010           di Lauro 2010           EHBatamy 2008           Fest for overall effect Z = 6.           Study or Subgroup           Arevalo 2019           di Lauro 2010           EHBatamy 2008           Fest for overall effect Z = 7.           Study or Subgroup           Arevalo 2019           di Lauro 2010           EHBatamy 2008           Fasial 2018           Arevalo 2019           di Lauro 2010           Fasial 2018           Arevalo 2019           di Lauro 2010           Fasial 2018           Arevalo 2019           di Lauro 2010           Fasial 2018           Fasial 2018           Arevalo 2015           Modares 2009           Rizzo 2008	53 (P < C Pr Mean 71.3 75 76 16 64.1 62 49 96 24 (P < C Pr Mean 71.3 75 7; ChP = = 12 (P < C Pr Mean 71.3 71.3 75 7; ChP = + 24 (P < C Pr Mean 71.3 75 7; ChP = + 24 (P < C Pr Mean 71.3 71.3 75 7; ChP = + 24 (P < C Pr Mean 71.3 71.3 75 7; ChP = + 24 (P < C Pr Mean 71.3 75 75 75 75 75 75 75 75 75 75	0.00001) e-ep/WB SD 32:1 19:45 19:45 19:45 10:35 19:45 10:35 10:35 10:35 10:35 10:35 10:35 10:35 10:35 10:35 11:35 10:35 11:35 10:35 11:35 10:35 11:35 10:35 1	Total 102 48 20 32 221 102 48 5 5 6 (P Total 102 48 15 28 20 21 102 48 15 28 20 102 48 15 22 21 11 258 8 20 22 21 11 258 8 20 22 21 11 258 8 20 22 21 11 258 8 20 22 22 11 102 48 5 22 22 11 102 48 20 22 22 11 102 48 5 22 22 11 102 48 5 22 22 11 102 22 22 11 102 22 22 11 102 22 22 11 102 22 22 11 102 22 22 11 102 22 22 22 11 102 48 5 28 20 22 22 11 102 48 5 28 20 22 22 22 11 102 48 5 28 20 22 22 22 11 102 48 5 28 28 20 22 22 22 11 102 48 5 28 28 20 22 22 22 11 102 48 5 28 28 20 22 22 22 11 10 256 (P Total 10 256 (P Total 10 256 (P Total 10 256 (P Total 10 256 (P Total 102 10 10 10 10 10 10 10 10 10 10	Mean           83.6           93.3           80.6           94.9           98           56           83.8           98.3           98.3           98.3           98.3           98.3           98.3           98.3           98.3           98.3           98.3           98.3           98.3           98.3           98.3           83.6	<b>lo IVB</b> <b>SD</b> 38.7 12 11.6 10.22 527 36.6 11 10.22 527 38.7 12 11.6 10.22 527 12.6 10.22 527 12.6 10.22 527 10.6 10.22 527 10.6 10.22 538.7 11.6 10.22 538.7 11.6 10.22 538.7 11.6 10.22 538.7 11.6 10.22 538.7 11.6 10.22 538.7 11.6 10.22 538.7 11.6 10.22 538.7 11.6 10.22 538.7 11.6 10.22 538.7 11.6 10.22 538.7 11.6 10.22 538.7 11.6 10.22 537 538.7 11.6 10.23 538.7 11.6 10.23 538.7 11.6 10.23 538.7 11.6 10.23 538.7 11.6 10.23 538.7 11.6 10.23 538.7 11.6 10.23 538.7 11.6 10.23 538.7 11.6 10.23 538.7 11.6 10.23 538.7 11.6 10.23 538.7 11.6 10.23 538.7 11.6 10.23 538.7 11.6 10.23 538.7 11.6 10.23 538.7 11.6 10.23 538.7 11.6 10.23 538.7 11.6 10.23 538.7 11.6 11.7 11.7 11.6 11.7 11.7 11.6 11.7 11.7 11.7 11.7 11.7 11.7 11.7 11.7 11.7 11.7 11.7 11.7 11.7 11.7 11.7	Total 112 24 28 20 34 11 242 27% Total 112 24 27% Total 112 24 28 % Total 112 28 % Total 112 28 20 34 112 24 20 34 112 24 27% 7% Total 112 28 20 34 112 28 28 28 28 28 28 28 28 28 2	14.9% 17.6% 17.6% 19.9% 0.0% 18.9% 16.2% 100.0% Weight 16.9% 16.8% 16.8% 16.9% 1	IV. Random, 95% CI           -12 30 (-21 80, -2 80)           -17 00 (-24 30, -9 70)           -31 70 (-41 10, -22 30)           -64 0 (-21 79, -11 01)           -36 00 (-56 49, -15 51)           -20 (-19 44, 24, 42)           -36 00 (-56 49, -15 51)           -20 (-19 44, 24, 42)           -36 00 (-56 49, -13 51)           -20 (-19 44, 24, 42)           -36 00 (-56 49, -13 51)           -19 (-16 (-25 -19, -13 -14))           Mean Difference           V, Random, 95% CI           -12 20 (-21 80, -280)           -17 00 (-24 30, -970)           -18 00 (-56 44, -15 51)           -700 (-18 42, 442)           -33 50 (-56 26, -4 35)           -20 (-12 440, -17 60)           -21 20 (-12 440, -17 60)           -17 00 (-24 30, -970)           -18 0 (-27 7, -11 -01)           -35 0 (-52 65, -4 35)           -35 0 (-52 65, -4 35)           -36 0 (-54 40, -17 60)           -17 00 (-24 30, -970)           -18 0 (-27 7, -11 -01)           -26 0 (-54 40, -17 60)           -36 0 (-54 40, -17 60)           -36 0 (-54 40, -17 60)           -18 0 (-27 9, -13 -55)           Mean Difference           V, Random, 95% CI	Favours [pre-op NB] Favours [No IVB] Mean Difference N. Random, 95% C1 -50 -50 Favours [pre-op NB] Favours [No NB] Mean Difference N. Random, 95% C1 -50 Favours [pre-op NB] Favours [No NB] Mean Difference N. Random, 95% C1 -50 Favours [pre-op NB] Favours [No NB] Mean Difference N. Random, 95% C1 -50 Favours [pre-op NB] Favours [No NB] Mean Difference
Test for overall effect Z = 5.           Study or Subgroup           Arevalo 2019           di Lauro 2010           EHBatny 2008           EHBatny 2008           Hernandez-Da Nota 2010           Manabe 2015           Nizzo 2009           Rizzo 2009           Rizzo 2009           Rizzo 2009           Rizzo 2009           Arevalo 2019           di Lauro 2010           EHBatny 2008           Fest for overall effect Z = 6.           Study or Subgroup           Arevalo 2019           di Lauro 2010           EHBatny 2008           Festal Coll (5% C)           Helerogeneity: Tau" = 36.07           Test for overall effect Z = 7.           Study or Subgroup           Arevalo 2019           di Lauro 2010           E-Batany 2008           Faisal 2018           Heronandez-Da Nota 2010           Modares 2009           Faisal 2018           Heronandez-Da Nota 2010           Heiterogeneity: Tau" = 44.83           Test for overall effect Z = 6.           Study or Subgroup           Arevalo 2019           Heiterogeneity: Tau" = 44.83	$\begin{array}{l} 53 \ (P < C \\ Pr \\ \hline Pr \\ \hline Mean \\ 71.3 \\ 75 \\ 75 \\ 75 \\ 75 \\ 75 \\ 75 \\ 75 \\ 7$	0.00001) 0.00001) 321 1945 1945 1945 10.36 10.36 57.3 9 17.93, dtl 0.00001) e-op IVB SD 32.1 19.45 31 19.45 31 19.45 32.1 19.45 31 19.45 32.1 14.5 32.1 14.5 32.1 14.5 32.1 14.5 32.1 14.5 32.1 14.5 32.1 14.5 32.1 14.5 32.1 14.5 32.1 14.5 32.1 14.5 32.1 14.5 14	Total 102 48 20 22 22 11 258 6 (P Total 102 28 48 102 22 11 246 6 (P Total 102 48 102 22 22 11 246 5 8 20 22 22 11 246 5 8 20 22 22 11 102 48 5 28 20 20 22 21 11 258 20 22 22 11 246 5 28 20 22 22 11 246 5 28 20 22 22 11 246 5 28 20 22 22 11 246 5 28 20 22 22 11 246 5 28 20 22 22 22 11 246 5 28 20 22 22 22 11 102 48 5 28 20 22 22 22 11 102 48 5 28 20 22 22 22 11 102 48 5 5 28 28 20 22 22 22 22 22 22 22 22 11 102 48 5 5 6 (P Total 102 26 28 28 20 22 22 22 22 22 22 22 22 22	Mean           83.6         84           93.3         80.5           83.6         98           98         98           96.5         83           80.6         93.3           80.6         93.3           80.6         93.3           80.6         98.3           98         98           98         96.5           98         83.6           98.3         96.5           98.3         80.6           98.3         96.5           98         84           96.5         98           98         96.5           98         83.6           98.6         95.5           98         83           98         96.5           98         83           98         83           98         83           98         83.6           83.6         83           93.3         93.3	to IVB SD 38.7 12 11.6 10.22 38.7 12 10.6 10.22 35.7 12 10.6 10.22 35.7 12 10.6 10.22 35.7 12 10.6 10.22 35.7 12 10.6 10.22 35.7 12 10.6 10.22 35.7 12 10.6 10.22 35.7 11.6 10.22 35.7 11.6 10.22 35.7 11.6 10.22 35.7 11.6 10.22 35.7 11.6 10.22 35.7 11.6 10.22 35.7 11.6 10.22 35.7 11.6 10.22 35.7 11.6 10.22 35.7 11.6 10.22 35.7 11.6 10.22 35.7 11.6 10.22 35.7 11.6 10.22 11.6 11.1 11	Total 112 24 25 28 20 34 11 242 24 15 28 20 34 112 24 24 15 28 20 34 112 24 28 20 34 112 24 28 20 34 112 24 28 20 34 112 24 28 20 34 112 24 28 20 34 112 24 28 20 34 112 28 28 20 34 112 28 28 20 34 112 28 28 20 34 112 28 28 20 34 112 28 28 20 34 112 28 28 20 34 112 28 28 20 34 112 28 28 20 34 112 28 28 20 34 112 28 28 20 34 112 28 28 20 34 112 28 28 20 34 112 28 28 20 34 112 28 28 20 34 112 28 28 20 34 112 28 28 20 34 112 28 28 20 34 112 28 28 28 20 38 112 28 28 28 28 20 38 112 22 24 112 28 28 28 20 38 112 28 28 28 20 38 112 28 28 28 28 28 28 28 28 20 34 112 28 28 28 28 20 34 112 28 28 28 28 20 34 112 28 28 28 20 34 112 28 28 20 34 112 24 24 15 28 28 20 34 112 28 28 112 28 28 112 28 112 28 28 112 112	14.9% 17.6% 17.6% 19.9% 0.0% 2.2% 18.9% 16.2% 100.0% Weight 16.9% 16.9% 16.0% 100.0% Weight 100.0% Weight 100.0% 10.	IV. Random, 95% CI           -12 30 (-21 80, -2 80)           -17 00 (-24 30, -9 70)           -31 70 (-41 10, -22 30)           -64 0 (-21 79, -11 01)           -36 00 (-56 49, -15 51)           -70 (-16 44 2, 442)           -32 50 (-52 65, -4.35)           -26 00 (-34 40, -17 60)           -12 30 (-21 80, -280)           -12 30 (-21 80, -280)           -17 00 (-14 42, 442)           -33 50 (-52 65, -4.35)           -33 70 (-41 0, -22 30)           -14 00 (-24 30, -9 70)           -17 00 (-24 30, -9 70)           -18 0 (-25 44, -17 60)           -33 50 (-52 65, -4.35)           -26 00 (-34 40, -17 60)           -23 0 (-21 80, -280)           -17 00 (-24 30, -9 70)           -17 00 (-24 30, -9 70)           -17 00 (-24 30, -9 70)           -33 50 (-56 55, -4 35)           -33 50 (-56 55, -4 35)           -33 50 (-56 55, -4 35)           -33 50 (-56 55, -4 35)           -33 50 (-56 55, -4 35)           -33 50 (-56 55, -4 35)           -33 50 (-56 55, -4 35)           -35 50 (-54 40, -17 60)           -19 74 (-25 92, -13 55)           Mean Difference           VR Andom, 95% CI           -17 50 (-24 30, -870)	Favours [pre-op NB] Favours [No IVB] Mean Difference N. Random, 95% C1 -50 -50 Favours [pre-op NB] Favours [No NB] Mean Difference N. Random, 95% C1 -50 Favours [pre-op NB] Favours [No NB] Mean Difference N. Random, 95% C1 -50 Favours [pre-op NB] Favours [No NB] Mean Difference N. Random, 95% C1 -50 Favours [pre-op NB] Favours [No NB] Mean Difference
Test for overall effect Z = 5.           Study or Subgroup           Arevalo 2019           di Lauro 2010           El-Batamy 2008           Faisal 2018           Hernandez Da Mota 2010           Hernandez Da Mota 2010           Mota 2015           Motodares 2009           Rizzo 2008           Total (95% CI)           Heterogeneity, Tau" = 39.88           Tota vorrall effect Z = 6.           Study or Subgroup           Arevalo 2019           di Lauro 2010           EHBatamy 2008           Faisal 2013           Motares 2009           Rizzo 2008           Total (95% CI)           Hernandez-Da Mota 2010           Herandez-Da Mota 2010	53 (P < C Pr Mean 71.33 67 68 64.1 62 49 96 22 57 71.3 67 61.6 64.1 62 49 96 22 57 71.3 62 49 96 22 57 71.3 62 49 96 22 57 71.3 62 49 96 22 57 71.3 62 49 96 22 57 71.3 62 49 96 22 57 71.3 62 49 96 22 57 71.3 62 49 96 22 57 71.3 62 49 96 22 57 71.3 62 49 96 22 57 71.3 62 64 1 62 49 96 22 57 71.3 62 64 1 62 49 96 22 57 71.3 62 64 1 62 49 96 22 57 75 75 75 75 75 75 75 75 75	0.00001) 0.00001) 1321 1345 1345 10.35 10.35 10.35 10.35 10.35 10.35 10.35 10.45 10.35 10.45 10.35 10.45 10.35 10.45 10.35 10.45	Total 102 48 15 28 20 11 258 26 7 102 48 15 28 20 11 102 48 15 28 20 11 102 48 15 28 20 11 102 48 15 28 20 11 102 48 15 28 20 22 21 11 102 48 15 28 28 20 22 21 11 102 48 15 28 28 20 22 21 11 102 48 15 28 20 22 22 11 102 48 15 28 20 22 22 11 102 48 15 28 20 22 22 11 102 48 15 28 20 22 22 11 102 48 15 28 20 22 22 11 102 48 15 28 20 22 22 11 102 48 15 28 20 22 22 11 102 48 15 28 28 20 22 21 11 246 6 (P Total 102 48 15 28 22 21 11 246 102 28 20 22 21 11 22 48 15 28 28 22 21 11 22 48 15 28 28 22 21 11 22 48 15 28 28 22 21 11 22 48 15 28 28 22 21 11 22 48 15 28 28 22 21 11 25 6 (P Total 102 24 8 22 21 11 25 48 15 28 28 22 21 11 25 48 15 28 28 28 22 21 11 25 48 15 28 28 28 22 21 11 25 48 28 28 28 28 28 28 28 28 28 2	Mean           83.6         84           93.3         80.5           98         56           98.3         80.6           98.3         80.6           98.3         80.6           98.3         80.6           98.3         80.6           98.3         80.6           98.3         80.6           98.3         80.6           98.3         80.6           98.3         80.6           98.3         80.6           98.3         80.6           98.3         80.6           98.3         80.6           98.3         80.6           98.3         80.6           98.3         80.6           99.6         83           99.6         83           99.6         83           99.6         83           98.3         84           83.6         84	Io IVIB         SD           38.7         12           11.6         10.22           38.7         12           10.10         10.22           38.7         12           11.6         10.22           38.7         12           11.6         10.22           36.7         12           11.6         11           38.7         12           11.6         10.22           38.7         12           11.6         10.22           38.7         12           11.6         10.22           38.7         12           38.7         10.22           36.7         11           39.7         17           30.7         12	Total           112         24           15         28           200         34           111         242           27%         7%           Total         112           24         155           28         200           34         1112           228         20           34         1112           228         20           34         112           244         15           9%         Total           1122         244           122         24           122         24           122         24           122         24           29%         Total	14.9% 17.6% 15.0% 19.9% 19.9% 12.2% 36% 16.2% 16.2% 16.2% 16.2% 16.2% 16.6% 0.0% 17.4% 17.4% 10.0% Weight 14.6% 0.0% 0.5% 0.0% 15.7% 10.0% 12.6% 0.0% 15.7% 10.0% 12.6% 0.0% 15.7% 10.0% 12.6% 12.6% 12.6% 12.8% 16.2% 17.6% 16.2% 17.6% 16.2% 17.6% 16.2% 17.6% 16.2% 17.6% 17.6% 17.6% 16.2% 17.6% 1	IV. Randorn, 95% CI           -12 30 12:18 (0, -2.80)           -17 00 12:4.30, -9.70)           -17 00 12:4.30, -9.70)           -17 00 12:4.30, -9.70)           -18 00 15:6.4.42           -33 50 16:2.65, -4.35]           -26 00 12:4.40, -17.60]           -19 16 [-25.19, -13.14]           Mean Difference           IV. Random, 95% CI           -12.30 [-21:80, -2.80]           -10 0 [-24:30, -9.70]           -10 0 [-24:30, -9.70]           -10 0 [-24:30, -9.70]           -10 0 [-24:30, -9.70]           -3.50 [-56:55, -4.35]           -26:00 [-34:40, -17.60]           -3.50 [-56:55, -4.36]           -20 0 [-14:40, -22.30]           -16:40 [-21.79, -11.01]           -30:50 [-56:55, -4.36]           -20:0 [-34:40, -17.60]           -30:50 [-56:55, -4.36]           -20:0 [-34:40, -17.60]           -30:50 [-56:55, -4.36]           -20:0 [-34:40, -17.60]           -12:0 [-14:30, -9.70]           -13:70 [-14:10, -22.30]           -14:0 [-24:30, -9.70]           -30:50 [-56:55, -35]           -20:0 [-34:40, -17.60]           -19:74 [-25:92, -13.55]           Mean Difference           VK, Random, 95% CI	Favours [pre-op NB] Favours [No IVB] Mean Difference N. Random, 95% C1 -50 -50 Favours [pre-op NB] Favours [No NB] Mean Difference N. Random, 95% C1 -50 Favours [pre-op NB] Favours [No NB] Mean Difference N. 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Test for overall effect Z = 5.           Study or Subgroup           Arevalo 2019           di Lauro 2010           El-Batamy 2008           Faisal 2018           Hernandez Da Mota 2010           Hernandez Da Mota 2010           Mota 2015           Motodares 2009           Rizzo 2008           Total (95% CI)           Heterogenetry, Tau" = 39.88           Total vortali effect Z = 6.           Study or Subgroup           Arevalo 2019           di Lauro 2010           EHBatamy 2008           Faisal 2018           Menabe 2015           Modares 2009           Rizzo 2008           Total (95% CI)           Hernandez-Da Mota 2010           Hernandez-Da Mota 2010           Hernandez-Da Mota 2010           Manabe 2015           Manabe 2016           Id Lauro 2010           EHBatamy 2008           Total (95% CI)           Hereandez-Da Mota 2010           Manabe 2015           Modares 2009           Rizzo 2008           Total (95% CI)           Heterogeneity: Tau" = 44.81           Test for overail effect Z = 6.           Study or	53 (P < C Pr Mean 71.33 67 68 64.1 62 49 96 224 (P < C Pr Mean 71.3 67 61.6 64.1 62 49 97 77, ChP = - 22 (P < C Pr Mean 71.3 67 64.1 62 49 97 77, ChP = - 26 (P < C 77 77, ChP = - 26 (P < C 77 71, 3 67 61 64.1 62 49 97 77, ChP = - 26 (P < C 71, 3 67 61 64.1 62 49 97 77, ChP = - 71, 3 67 61 64.1 62 49 97 77, ChP = - 71, 3 67 61 64.1 62 49 97 77, ChP = - 71, 3 67 61 64.1 62 49 97 77, ChP = - 71, 3 67 61 64.1 62 49 90 62 57 77 77, ChP = - 71, 3 67 61 64.1 62 49 90 62 57 77 77, ChP = - 71, 3 67 61 64.1	0.00001) -e-op IVB SD 3211 1946 1946 1945 31 20 9 9 17.93, dt 10.35 57.3 9 17.93, dt 10.35 32.1 19.45 10.35 32.11 19.45 10.35 32.11 19.45 10.35 32.11 19.45 10.35 32.11 19.45 10.35 32.11 19.45 10.35 32.11 19.45 10.35 32.11 19.45 10.35 32.11 19.45 10.35 32.11 19.45 10.35 32.11 19.45 10.35 32.11 19.45 10.35 32.11 19.45 10.35 32.11 19.45 10.35 32.11 19.45 10.35	Total 102 48 15 28 20 32 22 11 258 88 20 32 22 11 102 48 15 28 88 20 32 22 11 102 48 15 28 88 20 32 22 11 102 48 15 28 28 20 32 22 21 102 48 15 28 28 20 22 22 21 11 246 6 (P Total 102 246 5 28 29 22 22 21 11 246 5 5 28 28 20 22 22 21 11 246 5 5 28 29 22 22 21 11 246 5 5 28 29 22 22 21 11 246 5 5 5 28 29 22 22 21 11 102 246 5 5 5 6 (P Total 102 246 5 5 5 6 7 7 7 102 246 5 5 5 8 20 22 22 21 11 102 246 5 5 5 6 (P Total 102 246 5 5 28 20 22 21 11 246 5 5 28 20 22 21 11 25 6 (P Total 102 24 8 20 22 21 11 25 6 (P Total 102 25 26 20 22 21 11 25 6 (P Total 102 25 26 6 (P Total 102 25 26 20 20 20 20 21 11 256 6 (P Total 102 25 26 20 20 20 20 20 20 20 20 20 20	Mean           836           84           933           805           836           98           96.5           83           80.5           83.6           98	to IVB SD 38.7 12 11.6 10.22 35 27 36 11 10.22 37 36 10.22 37 36 10.22 37 36 10.22 37 36 11 10.22 37 36 11 10.22 37 36 11 10.22 37 36 11 10.22 37 36 11 10.22 37 36 11 10.22 37 36 11 10.22 37 36 11 10.22 37 36 11 10.22 37 36 11 10.22 37 36 11 10.22 37 36 11 10.22 37 36 11 10.22 37 36 11 10.22 37 38 11 10.22 37 38 11 10.22 37 38 11 10.22 37 38 11 10.22 37 38 11 10.22 37 38 11 10.22 37 38 11 10.22 37 38 11 10.22 38 11 10.22 37 38 11 10.22 37 38 11 10.22 37 38 11 10.22 37 38 11 10.22 37 38 11 10.22 37 38 11 10.22 37 38 11 10.22 37 38 11 10.22 37 38 11 10.22 37 38 11 10.22 37 38 11 10.22 37 38 11 10.22 37 38 11 10.22 37 38 11 10.22 37 38 11 10.22 38 11 10.22 38 11 10.22 38 11 10.22 38 11 10.22 38 11 10.22 38 11 10.22 38 10.22 10.22 38 10.22 10.22 10.22 38 10.22 10.2	Total 1122 24 15 28 20 34 112 27% Total 112 27% Total 112 28 20 34 112 28 20 34 112 28 20 20 34 11 244 9% Total 112 24 15 28 20 28 20 28 20 28 28 20 28 28 20 28 28 20 28 28 28 20 28 28 28 28 28 28 28 28 28 28	14.9% 17.6% 17.6% 19.9% 19.9% 10.0% 12.2% 3.6% 16.2% 16.2% 16.2% 16.2% 16.6% 0.0% 17.4% 14.6% 14.6% 10.0% Weight 14.6% 10.0% 15.7% 10.0% 15.7% 10.0% 15.7% 10.0% 15.7% 10.0% 15.7% 10.0% 15.7% 10.0% 15.7% 10.0% 15.7% 10.0% 15.7% 10.0% 15.7% 10.0% 15.7% 10.0% 15.7% 10.0% 15.7% 10.0% 15.7% 10.0% 15.7% 10.0% 15.7% 10.0% 15.7% 10.0% 10.	IV. Randorn, 95% CI           -12 30 12-18 (No. 2-80)           -17 00 12-43.0, -970)           -17 00 12-43.0, -970)           -17 00 12-43.0, -970)           -18 00 156.44 (-122.30)           -16 40 12-17.9, -11 0011           -36 50 16-26.65, -4.351           -26 00 12-44.00, -17.601           -19.16 [-25.19, -13.14]           Mean Difference           IV. Random, 95% CI           -17.00 [-24.30, -9.70]           -17.00 [-24.30, -9.70]           -35.00 [-26.65, -4.35]           -26.00 [-34.40, -17.60]           -10.00 [-24.30, -9.70]           -30.00 [-26.43, -15.61]           -7.00 [-18.42, -442]           -33.50 [-26.55, -4.36]           -28.00 [-34.40, -17.60]           -21.00 [-34.40, -17.60]           -17.00 [-43.40, -9.70]           -37.00 [-18.42, -442]           -33.50 [-26.55, -4.36]           -28.00 [-34.40, -17.60]           -31.70 [-41.01, -22.30]           -32.50 [-26.50, -4.35]           -33.50 [-26.50, -4.35]           -35.50 [-26.50, -4.35]           -35.50 [-26.50, -4.35]           -35.50 [-26.50, -4.35]           -35.50 [-26.50, -4.35]           -35.50 [-26.50, -4.35]           -35.50 [-26.50, -4.35]<	Favours [pre-op NB] Favours [No IVB] Mean Difference N. Random, 95% C1 -50 -50 Favours [pre-op NB] Favours [No NB] Mean Difference N. Random, 95% C1 -50 Favours [pre-op NB] Favours [No NB] Mean Difference N. 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Study or Subgroup Arevalo 2019 di Lauro 2015 Modares 2009 Notales 2015	$\begin{array}{l} 53 \ (P < C \\ Pr \\ \hline \mbox{Mean} \\ 71.3 \\ 75 \\ 75 \\ 75 \\ 75 \\ 75 \\ 75 \\ 75 \\ 7$	0.00001) 0.00001) <b>SD</b> 32.1 19.45 14.5 10.35 10.35 57.3 9 <b>SD</b> 17.93, dtl 10.36 57.3 9 <b>SD</b> 19.45 <b>SD</b> 32.1 19.45 <b>SD</b> 32.1 19.45 <b>SD</b> 32.1 19.45 <b>SD</b> 32.1 19.45 <b>SD</b> 32.1 19.45 <b>SD</b> 32.1 19.45 <b>SD</b> 32.1 19.45 <b>SD</b> 32.1 19.45 <b>SD</b> 32.1 19.55 <b>SD</b> 32.1 19.55 <b>SD</b> 32.1 19.55 <b>SD</b> 32.1 19.55 <b>SD</b> 32.1 19.55 <b>SD</b> 32.1 19.55 <b>SD</b> 32.1 19.55 <b>SD</b> 32.1 19.55 <b>SD</b> 32.1 19.55 <b>SD</b> 32.1 19.55 <b>SD</b> 32.1 19.55 <b>SD</b> 32.1 19.55 <b>SD</b> 32.1 19.55 <b>SD</b> 32.1 11.55 <b>SD</b> 32.1 11.55 <b>SD</b> 32.1 11.55 <b>SD</b> 32.1 11.55 <b>SD</b> 32.1 11.55 <b>SD</b> 32.1 11.55 <b>SD</b> 32.1 11.55 <b>SD</b> 32.1 11.55 <b>SD</b> 32.1 11.55 <b>SD</b> 32.1 11.55 <b>SD</b> 32.1 11.55 <b>SD</b> 32.1 11.55 <b>SD</b> 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<b>SD</b> <b>SD</b> <b>SD</b> <b>SD</b> <b>SD</b> <b>SD</b> <b>SD</b> <b>SD</b> <b>SD</b> <b>SD</b> <b>SD</b> <b>SD</b> <b>SD</b>	Total 102 48 52 28 20 32 22 11 258 5 6 (P Total 102 48 102 22 22 11 102 48 102 23 22 21 102 48 102 246 6 (P Total 102 246 5 28 20 22 22 21 102 102 48 102 26 27 22 21 102 102 102 102 102 102	Mean           83.6         84           93.3         80.5           95.5         83           95.5         83           80.6         95.5           83.8         80.5           98.8         86           95.5         83           98.8         86           95.5         83           98.8         86           95.5         83           96.9         95.5           83.6         95.5           98.8         86           96.5         83           97.5         83           98.8         86           98.8         83.6           98.8         83.6           98.8         83.8           83.6         83.8           83.8         83.8           83.8         83.8           83.8         83.8   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-9.70)           -31 70 (-41.10.22.30)           -64 0 (-21.79, -11.01)           -36 00 (-56.49, -15.51)           -70 (-16.42, 4.42)           -30 (-16.42, 4.42)           -30 (-16.42, 4.42)           -30 (-16.42, 4.42)           -30 (-16.42, 4.42)           -30 (-16.40, -17.60)           -19.16 (-25.19, -13.14)           Mean Difference           V, Random, 95% (-11.22, 30)           -17.00 (-24.30, -9.70)           -17.00 (-24.30, -9.70)           -18.00 (-56.44, -15.51)           -33.60 (-56.44, -15.51)           -36.00 (-54.40, -17.60)           -21.20 (-21.80, -2.80)           -17.00 (-24.30, -9.70)           -17.00 (-24.30, -9.70)           -33.60 (-56.44, -15.51)           -70.00 (-24.30, -8.70)           -17.00 (-24.30, -8.70)           -17.00 (-24.30, -8.70)           -35.00 (-56.5, -4.36)           -36.00 (-54.40, -17.60)           -37.70 (-14.42, -4.42)           -35.00 (-56.5, -4.36)           -36.00 (-54.30, -8.70)           -36.00 (-54.40, -17.60)           -37.70 (-14.10.22.30)           -17.00 (-24.30, -8.70)	Favours [pre-op NB] Favours [No IVB] Mean Difference N. Random, 95% C1 -50 -50 Favours [pre-op NB] Favours [No NB] Mean Difference N. Random, 95% C1 -50 Favours [pre-op NB] Favours [No NB] Mean Difference N. Random, 95% C1 -50 Favours [pre-op NB] Favours [No NB] Mean Difference N. Random, 95% C1 -50 Favours [pre-op NB] Favours [No NB] Mean Difference
Test for overall effect Z = 5.           Study or Subgroup           Arevala 2019           di Lauro 2010           EHBatny 2000           EHBatny 2000           Falsal 2010           Hernandez-Da Nota 2010           Manbe 2015           Modarres 2009           Rizzo 2008           Total (95% CI)           Hernandez-Da Nota 2010           Hernandez-Da Nota 2010           EHBatny 2000           Fest for overall effect Z = 6.           Study or Subgroup           Arevala 2010           Heirandez-Da Nota 2010           Heirandez-Da Nota 2010           Manabe 2015           Modares 2009           Rizzo 2009           Falsal 2018           Herandez-Da Nota 2010           Heirandez-Da Nota 2010           Heirandez-Da Nota 2010           Heirandez-Da Nota 2010           Modares 2015           Modares 2009           Rizzo 2009           Rizzo 2009           Rizzo 2009           Rizzo 2009           Heirandez-Da Nota 2010           Heirandez-Da Nota 2010           Heirandez-Da Nota 2010           Heierogeneity, Tau* = 44.87	$\begin{array}{l} 53 \ (P < C \\ Pr \\ \hline \mbox{Mean} \\ 71.3 \\ 75 \\ 75 \\ 75 \\ 75 \\ 75 \\ 75 \\ 75 \\ 7$	0.00001) 0.00001) 32.1 19.45 19.45 19.45 10.35 57.3 9 17.93, dti 0.00001) e-op IVB 50 32.1 19.45 10.36 31 19.45 31 19.45 31 19.45 31 19.45 32.1 19.45 32.1 19.56, dti 19.57, 3 9 19.58, dti 19.57, 3 9 19.58, dti 19.57, 3 10.57, 3 9 19.58, dti 10.57, 3 9 19.58, dti 10.57, 3 9 19.58, dti 10.57, 3 9 19.58, dti 10.57, 3 9 19.58, dti 10.57, 3 9 19.58, dti 10.57, 3 11.57, dti 11.57, dti	Total 102 48 20 32 22 11 258 8 20 32 22 11 102 48 8 20 32 22 21 1 102 48 8 20 32 22 21 1 258 8 20 32 22 21 1 258 8 20 32 22 21 1 258 8 20 32 22 21 1 258 8 20 32 22 21 1 258 8 20 32 22 21 21 21 258 8 20 32 22 21 21 21 21 21 21 21 21 2	Mean           83.6         84           93.3         80.5           95.5         83           96.6         84           93.3         80.6           95.5         83           80.6         96.5           98.8         80.6           98.8         80.6           99.8         83.8           99.8         83.8           93.3         80.5           98.8         83.6           95.5         83           98.8         83.6           98.8         86.8           95.5         83           80.6         96.8           93.3         80.5           83.8         96.8           93.3         80.5           93.3         80.5           93.8         96.8           93.3         97.5           98.8         96.5           98.8         96.5	<b>to IVB</b> <b>SD</b> 38.7 12 11.6 10.22 36 11 10.22 36 10.22 36 11 10.22 36 10.22 36 10.22 36 10.22 38.7 12 11.6 <b>SD</b> 38.7 12 10.22 35 27 36 10.22 35 27 36 10.22 35 27 36 10.22 35 27 36 10.22 35 27 36 10.22 35 27 36 10.22 35 27 36 10.22 35 27 36 10.22 35 27 36 10.22 35 27 36 10.22 35 27 36 10.22 35 27 36 10.22 35 27 36 10.22 35 27 36 10.22 35 27 36 10.22 35 38.7 12 11.6 50 38.7 12 11.6 50 38.7 12 11.6 50 38.7 12 11.6 50 38.7 12 11.6 50 38.7 12 11.6 50 38.7 12 11.6 50 38.7 12 11.6 50 38.7 12 11.6 50 38.7 12 11.6 50 38.7 12 11.6 50 77 38.7 12 11.6 50 77 38.7 12 11.6 50 77 38.7 12 11.6 50 77 38.7 12 11.6 50 77 38.7 12 11.6 50 77 38.7 12 11.6 50 77 38.7 12 11.6 50 77 38.7 12 11.6 50 77 38.7 12 11.6 50 50 77 38.7 12 1.6 50 50 50 77 38.7 12 12 55 57 7 38.7 12 1.6 50 50 50 50 50 50 50 50 50 50	Total           112           242           260           34           112           242           7%           Total           112           242           282           200           34           112           244           9%           Total           112           244           9%           Total           112           244           9%           112           244           112           244           112           244           112           244           112           244           112           244           112      244           112           244           112           244           112           244           112           244           112           112           113           114	14.9% 17.6% 17.6% 19.9% 0.0% 2.8% 19.9% 19.9% 10.00% Weight 16.9% 16.0% 16.0% 16.0% 16.0% 16.5% 100.0% Weight 16.6% 19.9% 10.0%	N, Randorn, 95% CI           -12 30 (-2180, -2.80)           -17 00 (-24.30, -9.70)           -31 70 (-41.10.22.30)           -51 70 (-51.92.23)           -64 0 (-21.79, -11.01)           -36 00 (-56.49, -15.51)           -70 (-16.42, 4.42)           -33.50 (-62.65, -4.35)           -26 00 (-34.40, -17.60)           -12.30 (-21.80, 0.2.80)           -17.00 (-24.30, -9.70)           -17.00 (-24.30, -9.70)           -17.00 (-24.30, -9.70)           -17.00 (-24.30, -9.70)           -17.00 (-24.30, -9.70)           -18.00 (-56.44, -15.51)           -33.60 (-56.44, -15.51)           -33.60 (-56.44, -15.51)           -33.60 (-56.44, -15.51)           -33.60 (-56.44, -15.51)           -33.60 (-56.44, -15.51)           -33.60 (-56.44, -15.51)           -70.0 (-24.30, -8.70)           -17.00 (-24.30, -8.70)           -17.00 (-24.30, -8.70)           -18.00 (-24.42, -4.42)           -33.50 (-56.54, -33)           -35.60 (-56.43)           -35.60 (-56.43)           -35.60 (-56.43)           -35.60 (-56.43)           -35.60 (-56.43)           -35.60 (-56.43)           -35.60 (-56.43)           -35.60 (-56.43	Favours [pre-op NB] Favours [No IVB] Mean Difference N. Random, 95% C1 -50 -50 Favours [pre-op NB] Favours [No NB] Mean Difference N. Random, 95% C1 -50 Favours [pre-op NB] Favours [No NB] Mean Difference N. Random, 95% C1 -50 Favours [pre-op NB] Favours [No NB] Mean Difference N. Random, 95% C1 -50 Favours [pre-op NB] Favours [No NB] Mean Difference

[2]

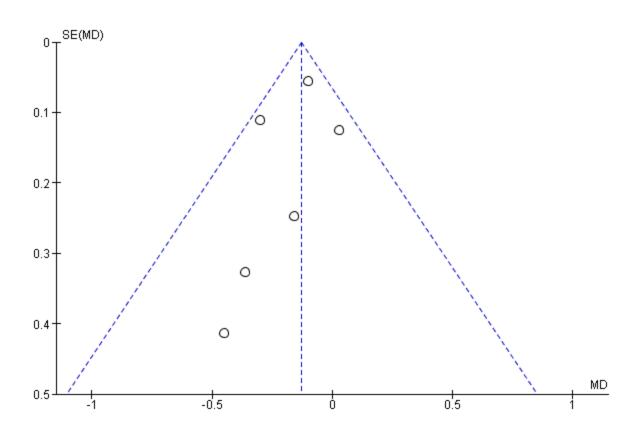
# B. Intraoperative iatrogenic retinal breaks

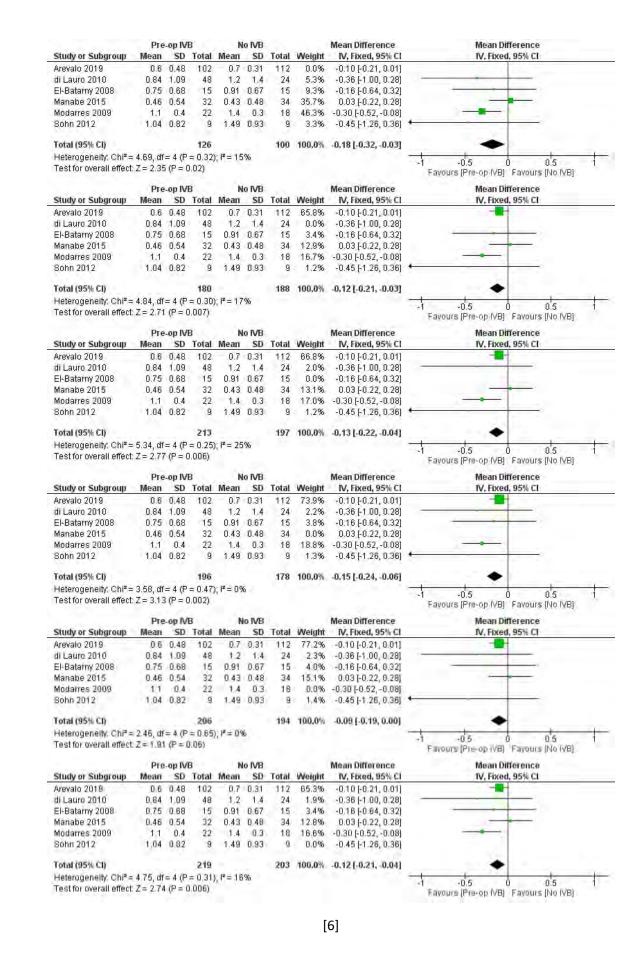




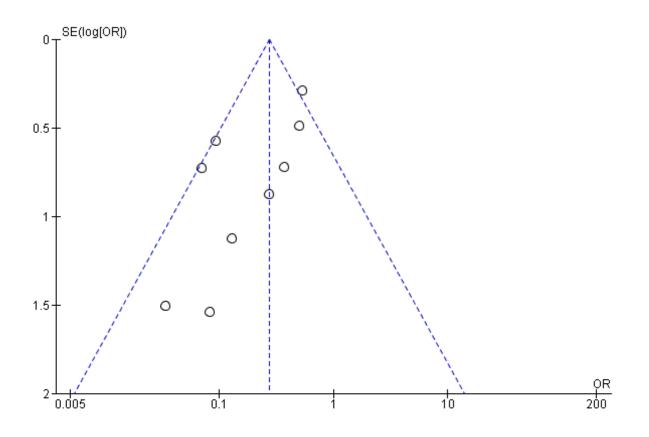
[4]

# C. LogMAR BCVA at last follow up





# D. Post-operative VH

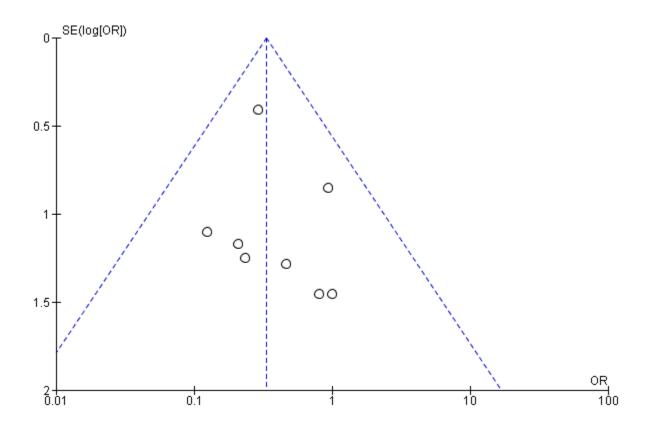


	Events.	Total	Events	Iotal	Weight	M.H. Random, 95% CI	MJI, Random, 95% CI	
Afimadiefi 2009 Afin 2011	13	35	26	39	0.0%	0.09 [0.03, 0.29] 0.50 [0.19, 1.31]		
Avevalo 2019 di Lauto 2010	29	102	48	112	26.3%	0.53 [0.30, 0.94] 0.20 [0.05, 0.89]		
Ri-Datamy 2008 Hemshöld-Da Mote 2010		15 20	4	15	428	0.00 (0.00, 1.60) 0.29 (0.09, 1.54)		
Manabe 2015	- X	32	8	34	74%	0.10.001, 0.810		
Modarres 2009 Zumun 2013	0	22.	20	18	4.4%	0.03 (0.00, 0.65) 0.07 (0.02, 0.30)		
Total (95% C0		290		287	100.0%	0.25 (0.13, 0.48)		
Total evenis Helstogenety Teu* = 0.35,	52		119				A	-
Test for overall effect Z= 4.	11 (P = 0.0	001)	2 qr = 97	080, 14.			9 005 01 10 Favourt (Pre-up NR) Favoure pun NR	2/6
	Pre-op (		No IV		in the	Odds Ratio	Odds Ratio	
Shudy or Subgroup Ahmadieti 2009	Events	7 <i>atu</i> 35	Events 26	Total 33	Weight 16.5%	64 H, Random, 95% CI 0.09 [0.03, 0.290	MJI, Randsm, 1955 CI	
Ann 3011 Arevelo 2019	13	35	18 48	34	0.0%	0.50 (0.19, 1.31) 0.53 (0.30, 0.94)	-	
di Lauto 2010	3	48	8	24	13,3%	0 20 (0,05, 0,89)		
El-Beismy 2008. Hemahola: Dis Mote 2016		15 20	, r 0	16	139%	0.09 [0.00, 1.69] 0.39 [0.09, 1.54]		
Manaba 2015 Modarres 2009	1	32	8	34	8.7%	0 10 10 01 , 0.810		
Zaman 2013	3	24	20	30	13.8%	0.07 10.02, 0.30		
Total (95% C0		298		286	100.0%	0.17 (0.88, 0.37)	•	
Total events Heterogenety: Tau*= 0.60;	45 Chi*+ 158	15. df=	137 7.0P=0.	03); /*:	56%		0005 01 10	700
Test for overall effect: 2 = 4.	48 (P < 0.0	0001)					Parcura (Pre-up Ivia) Eavourt Pto Ivia	
Study or Subgroup	Pre-op I Events	VII Totat	No IV	n Total	Weight	Odds Ratio M.H. Random, 95% CI	Odds Ratio MJI, Random, 1955 CJ	
Abmadieh 2009		35	.26	77	19.0%	0.0910.03, 0.290		
Ahri 2011 Arevalo 2019	13	38	18	34	22,4% 0.0%	0.50 (0.19, 1.31) 0.53 (0.30, 0.94)	-	
0i Lauro 2010 El-Batarry 2000	3	48	8	24	13,4%	0.20 (0.05, 0.89) 0.06 (0.00, 1.60)		
Hemphold Dia Mota 2016		- 297	. 0	20	14,4%	0.3910.09, 1.54		
Manabe 2015 Modarres 2000	0	32	87	34	7.8% 4,5%	0.10.001,0.80		
Zaman 2013	2	24	20	30	14.2%	0.07 10.02, 0.30)		
Total (95% Ci) Total events	33	232	97	508	100.0%	0.17 [0.09, 0.33]	• • • • • • • • • • • • • • • • • • •	
Heterogenety: Tau* = 0.27:	Ch# 4 10 1	6, af=	7 (P = 0)	18); (*:	-31%-		0.005 0.1 10	7.00
Testfor overall effect Z=5.				÷.,		40.00	Favourt (Frend MR) Favouri plante	0
Study or Subgroup	Pre-ap   Events	VII Total	No IV Events	Total	Weight	Odds Ratio M.H, Random, 95% Cl.	Odds Ratio MJI, Random, 95% CI	
Ahmadieh 2009 Ahn 2011	9	35 36	26 18	33 34	16.0%	0.0910.03, 0.290		
Arevisio 2019	13	102	48	112	22.0%	0.53 [0.30, 0.94]	+	
0i Lauto 2010 81-Detamy 2008	3	48	8	74 15	0,0%	0.2010.05, 0,891 0.0610.00, 1.60		
Hemanold-Da Mote 2010 Manaba 2015	1.12	20	0	20 34	13,2%	0.0010.09,1.54		
Modarreo 2009	0	22	7	18	5.1%	0.0310.00, 0.65		
Zumuni 2013	3	24	20	30	13.1%			
Tekni (95% Ci) Total evenis	59	296	139	296	100.0%	0.20 (0.10, 0.43)	•	
Heterogenety Tau* = 0.57, Test for overall effect 2 = 4.	Ch# + 16 f	12. df=	$7.6^{\mu} = 0.1$	02); /*:	59%		0.005 01 10	200
Test in official clott 2-4.	Pre-op		Not			Odds Rutio	Farours (Pre-sp /vii) Earours (An /vii) Odds Rater	
Study or Subgroup	Events	Total	Events	Total	Weight	M.H. Random, 95% EL	MJI, Random, 95% CI	
Ahmadieh 2009 Ahn 2011	13	35	26	33	14.9%	0.09 (0.03, 0.29) 0.50 (0.19, 1.31)		
AIRVING 2019	29	192 48	48	112	21 1%	0.53(0.00, 0.94)	-	
0i Lauro 2010 El-Batarry 2008	, i	15	8	16	11.5%	0.20 (0.05, 0.89) 0.08 (0.00, 1.69)		
Hemshold Dia Mote 2016 Manabe 2015	1	20	9 8	20 34	12,1%	0.2010.09, 1.54		
Modarres 2009 Zümlun 2013	0	22	7	18	4,5%	0.0310.00, 0.65		
	- 2		.20					
Total (95% Ci) Total events	62	319		305	100.0%	0.22 [0.44, 0.43]	-	
			181					
Heterogenem: Tau*= 0.50,	Ch# = 16.4	15, df=	7 (P = 0)	02); <b>P</b>	57%		1005 0'i 10	20
	Ch# = 16.0 38 (P = 0.0	001)	7 (P = 0)		57%	Colds Ballin	Farman (Pre-up IVR) Favouri plurios	
Holemoonolly Tau* = 0.50, Test for overall effect Z = 4. Study or Subgroup	ChP = 16. 38 (P = 0.0 Prs. op 1 Events	001) MII Tokat	7 (P = 0) No IV Events	n Total	Weight	Odds Rulio M.R. Random, 95% (1	0005 01 10 Favouri (Preus) NRI Favouri (Di Nis Odda Ratin Mit, Ranasan, 95% Ci	
Homogeneity Tau*= 0.50, Test for overall effect: Z = 4: Study or Salligroup Atmadiefr. 2009 Ahm 2011	Chi* = 16.0 38 (P = 0.0 Pril. op 1 Events 0 13	001) MI Totat 35 38	7 (P = 0) No IV Events 26 18	n Total 37 34	Weight 16,0% 17,5%	M.R. Random, 95% CI 0.09 [0.03, 0.290 0.50 [0.19, 1.31]	Favoure (Frend) VII) Favoure particle Odde Ratio	
Hoterogeneity Tau*= 0.50, Test for overall effect. Z = 4: Study or Statigroup Atmazen, 2009 Ann 2011 Arovac 2019	Chi <sup>a</sup> = 16.0 38 (P = 0.0 Pril. op 1 Events	001) Totat 35 36 102	7 (P = 0) No IV Events 26 18 48	n Total 37 34 112	Weight 16.0% 17.8% 21.9%	M H, Random, 95% Cl 0.09 [0.03, 0.290 0.50 [0.19, 1.31] 0.53 [0.30, 0.94]	Favoure (Frend) VII) Favoure particle Odde Ratio	
Hoteogenotin Tau* = 0.50, Testfor overall offect Z = 4: Study or Salegroup Ahmaciet: 2009 Ann 2011 Arovao 2019 Official State Biomony 2000	Chi <sup>a</sup> = 16.0 38 (P + 0.0 Pris april Events 9 13 25 3 0	001) VII Totat 35 36 102 46 15	7 (P = 0) No IV Events 26 18 48 8 8	1 10tal 37 34 31 24 16	Weight 16.0% 17.8% 21.9% 12.5% 5.0%	M.R. Random, 95% CI 0.09 [0.03, 0.29 0.50 [0.19, 1.31] 0.53 [0.30, 0.94] 0.20 [0.05, 0.99] 0.09 [0.00, 1.60]	Favoure (Frend) VII) Favoure particle Odde Ratio	
Heterogeneity: Tauf # 0.50; Testfor overall effect Z = 4: Study or Subgroup Anmaash; 2009 Anna 2019 Arovaro 2019 di Lauro 2010 Hermandes Dix Moto 2010 Hermandes Dix Moto 2015	Chr = 16.4 38 (P = 0.0 Pre-spi Events 9 13 79 3 4 13 29 13 29 13 29 13 13 29 13 29 13 13 29 13 13 13 13 13 13 13 13 13 13 14 14 14 14 14 14 14 14 14 14 14 14 14	001) VII 764.44 75 36 102 46 15 20 32	7 (P = 0) No IV Events 26 18 48 8	n 10tal 34 112 24 16 20 34	Weight 16.0% 17.8% 21.9% 12.5% 5.0% 0.0% 8.3%	M H, Random, 95% C1 0.09 (0.03, 0.29) 0.50 (0.19, 1.31) 0.53 (0.30, 0.94) 0.20 (0.05, 0.89) 0.09 (0.00, 1.60) 0.96 (0.00, 1.60) 0.96 (0.00, 1.63) 0.16 (0.01, 0.85)	Favoure (Frend) VII) Favoure particle Odde Ratio	
Heterogeneity: Tau" e 0.50; Testfor overall effect Z = 43 Study of Subgroup Annaaen 2008- Ann 2011 Arevac 2019 GLauro 2010 BLB estimy 2008 Hannale 2015 Manake 2019 Manake 2019	Chi#=16.4 38 (P + 0.0 Prs. op1 Events 9 13 29 3 3 4 4 5 0	001) VII Totat 35 36 102 46 15 20 32 22	7 (P = 0) No IV Events 26 18 48 8 8 8 7	n 10tal 34 112 24 16 20 34 18	Weight 16.0% 17.8% 21.9% 12.5% 5.0% 0.0% 8.3% 5.2%	M H, Random, 95% (1) 0.09 (0.03, 0.29) 0.50 (0.19, 1, 31) 0.53 (0.30, 0.94) 0.20 (0.35, 0.99) 0.09 (0.00, 1, 60) 0.90 (0.00, 1, 54) 0.16 (0.01, 0.89) 0.03 (0.00, 0, 06)	Favoure (Frend) VII) Favoure particle Odde Ratio	
Hoterogenetic Taur = 0.50; Test for overall effect Z = 4: Study or Subgroup, Annabet, 2009. Annabet, 2009. di Lauro 2019. di Lauro 2010. Benesmy 2000. Hannebe 2015. Modarez 2009. Zamar 2013.	Chr = 16.4 38 (P = 0.0 Pre-spi Events 9 13 79 3 4 13 29 13 29 13 29 13 13 29 13 29 13 13 29 13 13 13 13 13 13 13 13 13 13 14 14 14 14 14 14 14 14 14 14 14 14 14	001) VII Total 35 36 102 48 15 20 32 22 24	7 (P = 0) No IV Events 26 18 48 8 8 0	n 101al 112 14 112 14 16 20 34 10 30	Weight 16.0% 17.5% 21.9% 12.5% 5.0% 8.3% 5.2% 13.2%	M H, Random, 95% C1 0.091003, 0.290 0.50 [0.19, 1.31] 0.53 [0.30, 0.94] 0.20 [0.05, 0.99] 0.09 [0.00, 1.60] 0.30 [0.00, 1.60] 0.30 [0.00, 1.54] 0.10 [0.01, 0.05] 0.03 [0.00, 0.65] 0.07 [0.02, 0.30]	Favoure (Frend) VII) Favoure particle Odde Ratio	
Hoterogenetic Taur = 0.50; Tostifor overall effort Z = 4: Study or Statigroup: Ahmadeh, 2009. Ahmadeh, 2009. Oli Lauro 2019. Oli Lauro 2019. Oli Lauro 2019. Oli Lauro 2019. Oli Lauro 2019. Manske 2019. Modares 2009. Zentari 2013. Testal 1994.C0 Testal Sevice.	Chi <sup>a</sup> = 16.7 38 (P + 0.0 Pres april Events 9 13 79 9 13 79 9 13 79 9 13 79 9 13 79 9 13 79 9 13 79 9 13 79 9 13 79 9 13 79 9 13 79 9 13 79 9 13 79	001) VII Totat 35 36 102 48 15 20 32 24 314	7 (P = 0) No IV Events 26 18 48 8 8 7 20 137	n Total 37 34 312 34 16 20 34 18 30 300	Weight 16,0% 17,5% 21,9% 12,5% 5,0% 0,0% 8,3% 5,2% 13,2% 100,0%	M H, Random, 95% (1) 0.09 (0.03, 0.29) 0.50 (0.19, 1, 31) 0.53 (0.30, 0.94) 0.20 (0.35, 0.99) 0.09 (0.00, 1, 60) 0.90 (0.00, 1, 54) 0.16 (0.01, 0.89) 0.03 (0.00, 0, 06)	Favoure (Frend) VII) Favoure particle Odde Ratio	
Hoterogenetic Taur = 0.50; Tostifor overall effort Z = 4: Study or Statigroup: Ahmadeh, 2009. Ahmadeh, 2009. Oli Lauro 2019. Oli Lauro 2019. Oli Lauro 2019. Oli Lauro 2019. Oli Lauro 2019. Manske 2019. Modares 2009. Zentari 2013. Testal 1994.C0 Testal Sevice.	Chi* = 16 / 38 (P + 0.0 Pres epr Events 9 13 79 9 13 79 9 13 79 9 13 79 9 13 79 9 13 79 9 13 79 9 13 79 9 13 79 9 13 79 9 13 79 9 13 79 10 10 10 10 10 10 10 10 10 10 10 10 10	001) VII Totat 35 36 102 45 15 20 32 24 314 0.01 0.01	7 (P = 0) No IV Events 26 18 48 8 8 7 20 137	n Total 37 34 312 34 16 20 34 18 30 300	Weight 16,0% 17,5% 21,9% 12,5% 5,0% 0,0% 8,3% 5,2% 13,2% 100,0%	M H, Random, 95% C1 0.091003, 0.290 0.50 [0.19, 1.31] 0.53 [0.30, 0.94] 0.20 [0.05, 0.99] 0.09 [0.00, 1.60] 0.30 [0.00, 1.60] 0.30 [0.00, 1.54] 0.10 [0.01, 0.05] 0.03 [0.00, 0.65] 0.07 [0.02, 0.30]	Panal (Press) MIL Proceedings	70
Hoterogenetic Tau" = 0.50, Testfor overall officit. Z = 4. Study or Standowsky Anmadul, 2009 Anmadul, 2009 Manual, 2009 Manual, 2009 Manual, 2009 Manual, 2009 Manual, 2009 Manual, 2009 Manual, 2009 Zamar 2013 Tabil Annot Tabil Annot Tabil Annot Tabil Annot Manual, 2009 Zamar 2013 Tabil Annot Tabil Annot Manual, 2009 Manual, 2009	Chi* = 16 / 38 (P + 0.0 Pres epr Events 9 13 79 9 13 79 9 13 79 9 13 79 9 13 79 9 13 79 9 13 79 9 13 79 9 13 79 9 13 79 9 13 79 9 13 79 10 10 10 10 10 10 10 10 10 10 10 10 10	001) VII Total 35 36 102 48 15 20 32 22 24 314 0.df= 001)	7 (P = 0) No IV Events 26 18 48 8 8 7 20 137	n <u>Iotal</u> 37 34 112 24 16 20 34 18 30 300 020: P	Weight 16,0% 17,5% 21,9% 12,5% 5,0% 0,0% 8,3% 5,2% 13,2% 100,0%	M H, Random, 95% C1 0.091003, 0.290 0.50 [0.19, 1.31] 0.53 [0.30, 0.94] 0.20 [0.05, 0.99] 0.09 [0.00, 1.60] 0.30 [0.00, 1.60] 0.30 [0.00, 1.54] 0.10 [0.01, 0.05] 0.03 [0.00, 0.65] 0.07 [0.02, 0.30]	Panad (Press) MIL Proceeding	70
Heinropanen Tau" e 0 50, Tästär oreani effett 2 = 47 Stady et Subgrup Anno 241 Ulano 2701 Bilano 2701	Chi <sup>2</sup> = 16/ 38 (P + 0.0 Pres ap 1 200ms 13 75 75 75 75 75 75 75 75 75 75 75 75 75	001) Total 35 36 102 46 15 20 37 22 24 314 0. df= 001) VII Total	7 (P = 0) No IV Events 26 18 48 8 8 7 20 137 7 (P = 0) No IV Events	n Total 37 34 112 20 34 16 30 300 300 020: P* 0 Total	Weight 16.0% 17.5% 21.9% 12.5% 5.0% 0.0% 8.3% 13.7% 100.0% 5.0% 000.0% 000.0% 000.0% 000.0%	MH, Random, 55% CL 0.091103,039 0.050 (103,0,131 0.050 (103,0,131 0.020 (100,0,154) 0.020 (100,0,154) 0.020 (100,0,154) 0.021 (100,0,154)	Paroual (Preugo Nell Encompting) Odds Ratio MA, Random, 95% O 	70
Heinorgenet Turi e 0.50, Testi to reveal effect 2.4.3. Stoly or Salarwing Annaean 2009 Annaean 2009 Annaean 2009 Annaea 2019 Usanae 2019 Usanaea 2019 Usanaea 2019 Usanaea 2019 Usanaea 2019 Usanaea 2019 Usanaea 2019 Usanaea 2019 Usanaea 2019 Usanaea 2019 Manaea 2019 Annaea 2019 Anna	Chi <sup>p</sup> = 16.4 38 (P + 0.0 Pres apl Events 9 9 13 35 55 Chi <sup>p</sup> + 17.5 37 (P + 0.0 Pres apl Events 9 9 9 9 9 9 9 9 9 9 9 9 9	001) Tetat 25 35 102 46 15 200 32 22 24 314 10.df= 001) VII Total 35 35 102 22 24 314 102 23 35 35 35 102 24 315 36 36 36 36 36 36 36 36 36 36	7 (P = 0) No IV Events 26 18 48 48 5 0 8 7 20 137 7 (P = 0) No IV Events 20 137 7 (P = 0) 137 7 (P = 0)	n Total 37 34 15 20 34 16 30 300 300 900: P <sup>+</sup> 0 Total 33 34	Weight 16.0% 17.5% 21.9% 5.0% 0.0% 5.2% 13.2% 100.0% 5.9% Weight 15.3% 17.2%	M41, Runders, 55%-CI 0.09 (0.3, 0.2%) 0.53 (0.20, 0.14), 0.53 (0.20, 0.14), 0.53 (0.20, 0.14), 0.53 (0.20, 0.14), 0.53 (0.20, 0.14), 0.63 (0.01, 0.86), 0.63 (0.01, 0.86), 0.63 (0.01, 0.86), 0.63 (0.01, 0.86), 0.64 (0.01, 0.86), 0.64 (0.01, 0.86), 0.64 (0.01, 0.86), 0.64 (0.01, 0.86), 0.64 (0.01, 0.87), 0.64 (0.01, 0.37), 0.69 (0.3, 0.37	Panual (Preug Avil) E Procent print Odeh Ratin MA, Ranston, 69% D	70
напосаранов Тан" е 0.50, Техто очези бов 12. 4-3. Statu ovesi бов 12. 4-3. Statu ovesi бов 12. 4-3. Алтаная 2019 Алтаная 2019 Калала 2019 Ка	Chi <sup>2</sup> = 16/ 38 (P = 0.0 Pres apl Dense 13 79 3 79 3 79 3 79 3 79 3 8 4 4 1 0 3 3 5 8 Chi <sup>2</sup> = 10 7 3 7 9 3 7 9 3 7 9 3 7 9 3 7 9 3 7 9 9 3 7 9 9 3 7 9 9 9 9	001) MI Total 25 36 102 48 105 20 22 24 314 10, df= 001) MI Total 25 36 102 22 24 314 10, df= 35 36 102 24 315 102 24 315 102 25 36 102 25 36 102 25 36 102 25 36 102 25 36 102 25 36 102 25 36 102 25 36 102 25 26 102 25 102 25 102 25 26 102 25 102 25 102 25 102 25 102 25 102 25 102 25 102 25 102 25 25 102 25 102 25 25 102 102 102 103 102 102 102 102 102 102 103 102 103 103 103 105 105 105 105 105 105 105 105	7 (P = 0) No IV <u>Povents</u> 206 18 48 8 8 7 20 137 7 (P = 0) No IV <u>Povents</u> 20 137 7 (P = 0) <u>No IV</u> <u>Povents</u> 8 7 20 13 8 7 20 13 8 7 20 13 8 7 20 13 8 7 20 13 8 7 20 13 8 7 20 13 7 20 13 8 7 20 13 8 7 20 13 7 20 13 7 20 13 7 20 13 7 20 13 7 20 13 7 20 13 7 20 13 7 20 13 7 20 13 7 20 13 7 20 13 7 20 13 7 20 13 7 20 13 7 20 13 8 8 8 8 8 8 7 20 13 13 8 8 8 8 8 8 8 7 20 13 7 7 8 8 8 8 8 8 8 8 8 8 8 8 8	n Total 33 112 34 112 34 16 30 300 300 300 000: P 0 Total 33 34 112 24	Weight 16,0% 17,5% 21,9% 12,5% 5,0% 8,3% 13,2% 100,0% 59% Weight 15,3% 17,2% 21,8% 11,5% 11,5%	MH, Runstern, 5%-CL 0.09 (0.3, 0.2%) 0.53 (0.20, 0.14), 1.31 0.53 (0.20, 0.14), 1.31 0.53 (0.20, 0.14) 0.53 (0.20, 0.14) 0.53 (0.20, 0.14) 0.09 (0.0, 0.14) 0.09 (0.0, 0.14) 0.045 (0.04), 0.46) 0.045 (0.04), 0.46) 0.049 (0.04), 0.35 0.09 (0.0, 0.2%) 0.09 (0.0, 0.2%) 0.05 (0.14), 0.2% (0.0%) 0.05 (0.14), 0.2% (0.0%) 0.05 (0.15), 0.2% (0.0%) 0.05 (0.0%), 0.2% (0.0%), 0.2% (0.0%) 0.00 (0.0%), 0.2% (0.0%), 0.2% (0	Panual (Preug Avil) E Procent print Odeh Ratin MA, Ranston, 69% D	70
Heinrogener Tau" e 0.50, Testär overali officit 2-4 1 Stehn or Salariste Annuaet - 2010 Annuaet - 2010 Annuaet - 2010 Kanna 2011 Kanna 2010 Kanna 2010 Ka	Chi <sup>p</sup> = 16.7 38 (P + 0.0 Pres spi Pres spi 13 7% 13 38 4 1 0 3 56 Chi <sup>p</sup> + 17 37 (P + 0.0 Pres spi Pres spi Pres spi 13 37 9 13 13 13 13 13 14 15 15 15 15 15 15 15 15 15 15	001) MI 25 35 102 46 15 370 32 22 24 314 0.0f= 001) MI Total 35 36 102 24 314 314 102 25 36 102 26 36 102 26 102 26 102 102 102 102 102 102 102 102	7 (P = 0) No N/ Events 26 18 48 8 7 20 137 7 (P = 0) No N/ Events 26 18 48 48 7 20 137 7 (P = 0) 137 7 (P = 0) 14 14 15 15 16 16 16 16 16 16 16 16 16 16	n Total 37 34 16 30 300 300 300 7 7 7 7 7 7 7 7 7 7 7 7 7	Weight 16,0% 17,5% 21,9% 12,5% 12,5% 13,2% 13,2% 100,0% 59% Weight 15,3% 17,5% 21,8% 21,8% 21,8% 15,3% 12,5% 15,3% 12,5% 12,5% 12,5% 12,5% 12,5% 12,5% 12,5% 12,5% 12,5% 12,5% 12,5% 12,5% 12,5% 12,5% 12,5% 12,5% 13,2% 13,2% 13,2% 13,2% 13,5% 13,5% 13,2% 13,2% 13,2% 13,2% 13,2% 13,2% 13,2% 13,2% 13,2% 13,2% 13,2% 13,2% 13,2% 13,2% 13,2% 13,2% 14,5% 14,5% 14,5% 14,5% 14,5% 15,5% 13,2% 14,5% 14,5% 14,5% 15,5% 15,5% 14,5% 15,5% 1	MH, Runstern, 55%-LC 0.048103,0.22% 0.4591030,0.24% 0.4591030,0.24% 0.4591030,0.24% 0.4591030,0.24% 0.4591030,0.4591 0.4591030,0.4591 0.4591030,0.4591 0.4591030,0.4491 0.4591030,0.4491 0.4591030,0.45910 0.4591030,0.45910 0.4591030,0.45910 0.4591030,0.45910 0.4591030,0.45910 0.4591030,0.45910 0.4591000,0.45910 0.4591000,0.45910 0.4591000,0.45910 0.4591000,0.45910 0.4591000,0.45910 0.4591000,0.45910 0.4591000,0.45910 0.4591000,0.45910 0.4591000,0.4591000,0.4591000000000000000000000000000000000000	Panual (Preug Avil) E Procent print Odeh Ratin MA, Ranston, 69% D	70
Heinorgenet Turi e 0.56, Testi orean defat Z = 43. Stefa visitatione and the second Annaea 2010 Annaea 2010	Chi <sup>2</sup> = 16, (38, 9 + 0.0) Pensori Events 9 329 329 329 33 4 4 5 5 5 5 5 5 5 5 5 5 5 5 5	001) Tetat 35 36 16 25 36 16 16 16 270 32 22 24 314 16 16 270 32 22 24 314 16 16 20 16 22 24 314 16 16 25 36 16 20 16 22 24 24 16 16 16 20 16 22 24 24 24 25 36 16 20 16 22 24 24 24 25 36 25 22 24 24 25 36 25 36 25 22 24 24 25 36 25 26 27 27 27 27 27 27 27 27 27 27	Ko IV           Povritis           26           16           48           8           8           9           8           9           10           11           120           137           70           137           70           137           70           137           137           137           137           138           48           6           4           6           4	n Total 77 34 16 20 34 16 30 300 300 500 100 100 100 100 100 100 1	Weight 16,0% 17,5% 21,9% 12,5% 5,0% 12,5% 13,7% 10,0% 5,2% 13,7% 10,0% 5,2% 13,7% 10,0% 5,9% 15,3% 1,7% 11,5% 11,5% 12,5%	141, Rundern, 55%-CI 0.09 (10.23, 0.29) 0.55 (10.20, 0.24) 0.55 (10.20, 0.24) 0.20 (10.25, 0.20) 0.20 (10.25, 0.20) 0.20 (10.25, 0.20) 0.20 (10.25, 0.20) 0.21 (10.25, 0.25) 0.21 (10.25, 0.25) 0.21 (10.25, 0.25) 0.21 (10.25, 0.25) 0.21 (10.25, 0.25) 0.21 (10.25, 0.25) 0.25 (10.25	Panual (Preug Avil) E Procent print Odeh Ratin MA, Ranston, 69% D	70
Heinrogenet Tau" e 0.50, Testato everal effect 2-4 Best of scalar (1994) Ammaer, 2006 Ammaer, 2006 Ammaer, 2006 Gillamor 2016 Gillamor 2016 Gillamor 2016 Modures 2016 Modures 2016 Tatil avest Intercogenet, Tau" e 0.50, Tatil avest Intercogenet, Tau" e 0.57, Tatil avest Intercogenet, Tau" e 0.57, Intercogenet, Tau Intercogenet, Tau Intercogenet, Tau Intercogenet, Tau Intercogenet, Tau Intercoge	Chi <sup>2</sup> = 16.4 38 (P + 0.0 Presspi 9 13 39 39 39 30 4 4 31 30 4 4 31 55 Chi <sup>2</sup> + 17.5 37 (P + 0.0 2 Presspi 13 39 39 13 39 4 4 4 30 4 4 4 30 4 4 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	001) MI Total 25 36 35 36 15 20 37 22 24 5 314 0. df= 001) MI Total 36 37 22 24 5 32 32 32 32 32 32 32 32 32 32	No fV         F(P = 0)           No fV         26           18         8           48         8           6         7           20         137           7 (P = 0)         137           7 (P = 0)         138           8         8           9         137           137         7 (P = 0)           138         8           138         6           148         8           15         140	n Total 37 34 152 20 34 16 30 300 300 300 10 10 10 10 10 10 10 10 10	Weight 16,0% 17,5% 21,9% 5,0% 0,0% 9,3% 5,2% 13,2% 100,2% 15,3% 17,2% 21,8% 11,5% 11,5% 11,5% 11,5% 11,5% 11,5% 12,5% 12,5% 13,2% 14,5% 13,2% 14,5	M41, Remarker, 55%, CL 0.09 (0.20, 0.29) 0.55 (0.10, 0.13) 0.53 (0.10, 0.14) 0.53 (0.10, 0.14) 0.53 (0.10, 0.14) 0.53 (0.10, 0.14) 0.63 (0.11, 0.64) 0.63 (0.11, 0.64) 0.64 (0.10, 0.14) 0.64 (0	Panual (Preug Avil) E Procent print Odeh Ratin MA, Ranston, 69% D	70
Heinorganet Turi e 0.50, Testor overal effect 2.4.3. Study or Salarozaja Annaen 2010 Annaen 2010 Annae	Chr = 16.6 2 38 (P - UD) Pen apple 23 (P - UD) 23 (P - UD) 23 (P - UD) 24 (P - UD) 25 (P - UD) 26 (P - UD) 29 (P - UD) 29 (P - UD) 29 (P - UD) 20 (P -	001) Tetat 75 36 162 25 36 162 25 36 162 27 34 46 15 270 322 24 314 10, df= 001) VII Total 10, 22 24 314 10, 25 36 10, 22 24 314 10, 25 36 10, 22 24 10, 25 10, 25	No IV           No IV           26           18           26           18           26           18           8           8           9           137           7(P=0)           No IV           North           20           137           20           137           7(P=0)           9           8           6           7           20           2137           20           2137           20           2137           20           2137           20           2137           20           2137           20           2137           20           3137           314           315           315           316           317           318           318           319           310           310           311	n Total 77 34 112 20 34 16 30 300 300 000: P <sup>3</sup> 0 Total 33 4 112 20 300 000: P <sup>3</sup> 0 112 20 10 10 10 10 10 10 10 10 10 1	Weight 16,0% 17,5% 21,9% 5,0% 5,0% 5,2% 10,0% 5,2% 10,0% 5,2% 10,0% 15,3% 10,0% Weight 15,3% 11,2% 0,0% 14,5% 0,0% 12,5% 0,0% 14,5% 15,5% 15,5% 15,5% 12,5% 13,5% 13,5% 14,5% 15,7% 14,5% 15,7% 15,5% 15,7% 1	M14, Readers, 75%, CL           0.0911023, 0.250           0.0911023, 0.250           0.0911023, 0.201           0.0911023, 0.201           0.0911023, 0.201           0.0911023, 0.201           0.0911023, 0.201           0.0911023, 0.201           0.0911023, 0.201           0.0911023, 0.201           0.0911023, 0.211           0.0911023, 0.211           0.0911023, 0.211           0.0911023, 0.211           0.0911023, 0.211           0.0911023, 0.211           0.0911023, 0.211           0.0911023, 0.211           0.0911023, 0.211           0.0911023, 0.211           0.0911023, 0.211           0.0911023, 0.211           0.0911023, 0.211           0.0911023, 0.211           0.0911023, 0.211           0.0911023, 0.211           0.0911023, 0.211           0.0911023, 0.211           0.0911113           0.091113           0.0911023, 0.211           0.0911023, 0.211           0.0911023, 0.211           0.0911023, 0.211           0.0911023, 0.211           0.0911023, 0.211           0.0911023, 0.2111           0.0911023, 0.2111<	Panual (Preug Avil) E Procent print Odeh Ratin MA, Ranston, 69% D	70
Heinrogenet Tau" e 0.50, Test for even in direct 2 e 3 - Manuser, Stady or Salarder Annuser, Stady or Salarder Annuser, Stady or Salarder Annuser, Salarder Heinrogenet, Salarder Literator, Salarder Literator, Salarder Literator, Salarder Literator, Salarder Salarder Literator, Salarder Salar	Chr = 16.6 2 38 (P - 0.00 2 <u>Events</u> 0 0 0 0 0 0 0 0 0 0 0 0 0	0011) VII Tetaat 375 36 36 370 372 274 314 102 274 314 102 274 314 102 274 314 102 274 314 102 274 314 102 274 314 102 274 314 102 274 314 102 274 314 102 274 314 314 314 102 274 314 314 314 314 314 314 314 31	7 (₽ =0). No IV Powntis 26 18 8 8 8 8 8 8 8 8 8 8 8 9 18 18 8 8 8 8 8 8 9 18 18 8 8 8 8 9 18 18 8 8 8 8 8 8 18 8 8 8 8 8 8 18 8 18 8 18 8 18 8 18 8 18 8 18 1	n <u>Iotal</u> 37 34 16 20 30 300 300 000 P <sup>-</sup> 0 <u>Iotal</u> 34 16 30 300 000 P <sup>-</sup> 0 <u>Iotal</u> 34 16 30 300 20 0 20 0 20 0 20 0 20 0 20 0 20 0 20 0 20 2	Unight 16,0% 17,5% 21,9% 5,0% 12,5% 5,0% 100,0% 15,3% 11,3% 4,5% 4,5% 4,5% 4,5% 4,5% 4,5% 4,5% 4,5	141, Random, 55%, Cl 0,09 (10,3,0,32) 0,55 (10,3,0,32) 0,55 (10,3,0,32) 0,55 (10,3,0,32) 0,55 (10,3,0,32) 0,52 (10,3,0,31) 0,52 (10,0,1,54) 0,52 (10,0,1,54) 0,52 (10,0,1,54) 0,52 (10,0,1,54) 0,52 (10,0,1,54) 0,59 (10,3,2,54) 0,59 (10,3,2,54) 0,59 (10,3,1,54) 0,59 (10,3,1,54) 0,59 (10,3,1,54) 0,59 (10,3,1,54) 0,55 (10,3,1,54)\\0,55 (10,3,1,54)\\0,	Paroual (Preugo Ivel) - Brocen Parios Odeh Ratin Maji Ranston, 90% O	200
Heinorganet Turi e 0.50, Testor overal effect 2.4.3. Study or Salarozaja Annaen 2010 Annaen 2010 Annae	Chr = 16.6 2 38 (P - 0.00 2 <u>Events</u> 0 0 0 0 0 0 0 0 0 0 0 0 0	0011) VII Tetaat 375 36 36 370 372 274 314 102 274 314 102 274 314 102 274 314 102 274 314 102 274 314 102 274 314 102 274 314 102 274 314 102 274 314 102 274 314 314 314 102 274 314 314 314 314 314 314 314 31	7 (₽ =0). No IV Powntis 26 18 8 8 8 8 8 8 8 8 8 8 8 9 18 18 8 8 8 8 8 8 9 18 18 8 8 8 8 9 18 18 8 8 8 8 8 8 18 8 8 8 8 8 8 18 8 18 8 18 8 18 8 18 8 18 8 18 1	n <u>Iotal</u> 37 34 16 20 30 300 300 000 P <sup>-</sup> 0 <u>Iotal</u> 34 16 30 300 000 P <sup>-</sup> 0 <u>Iotal</u> 34 16 30 300 20 0 20 0 20 0 20 0 20 0 20 0 20 0 20 0 20 2	Unight 16,0% 17,5% 21,9% 5,0% 12,5% 5,0% 100,0% 15,3% 11,3% 4,5% 4,5% 4,5% 4,5% 4,5% 4,5% 4,5% 4,5	141, Random, 55%, Cl 0,09 (10,3,0,32) 0,55 (10,3,0,32) 0,55 (10,3,0,32) 0,55 (10,3,0,32) 0,55 (10,3,0,32) 0,52 (10,3,0,31) 0,52 (10,0,1,54) 0,52 (10,0,1,54) 0,52 (10,0,1,54) 0,52 (10,0,1,54) 0,52 (10,0,1,54) 0,59 (10,3,2,54) 0,59 (10,3,2,54) 0,59 (10,3,1,54) 0,59 (10,3,1,54) 0,59 (10,3,1,54) 0,59 (10,3,1,54) 0,55 (10,3,1,54)\\0,55 (10,3,1,54)\\0,	Panual (Preug Avil) E Procent print Odeh Ratin MA, Ranston, 69% D	200
напосаранов Тан" е 0.50, Такто очени боль 7 е 4.50, <b>Status ovenu боль 7</b> , <b>Annaen 2010</b> <b>Annaen 2010</b> <b>Annaen 2010</b> <b>Annaen 2010</b> <b>Billionar 2010</b>	China 16.6	0011) VIII Totaat 335 349 349 349 349 349 349 349 349	No IV           No row           26           27           26           26           18           8           8           7           20           137           20           10           10           10           10           10           10           10           10           10           10           10           10           11           12           137           137           137           130           131           132           131           132           131           132           131           132           131           132           131           132           131           132           131           132           133           132           133           133           133 </td <td>n <u>Total</u> 31 32 34 16 300 300 000: P<sup>3</sup> 5 000: P<sup>3</sup> 000: P<sup>3</sup> 16 300 300 300 300 300 300 300 30</td> <td>Veraged 16.0% 17.5% 21.9% 21.9% 5.0% 00.0m 5.2% 15.3% 15.3% 15.3% 15.3% 15.3% 10.00m 15.3% 15.3% 10.00m 15.3% 1</td> <td>1414, Brandson, 95%-CL 0.0911023, 0.256 0.0501024, 0.231 0.0511023, 0.256 0.0501024, 0.241 0.0511024, 0.051 0.0511024, 0.051 0.0511024, 0.051 0.0511024, 0.051 0.0511024, 0.051 0.0511023, 0.0511023, 0.051 0.0511023, 0.051</td> <td>Paradar (Preuge Net) E Precent Paris Odds Ratio MA, Ranston, 95% O 10005 10</td> <td>200</td>	n <u>Total</u> 31 32 34 16 300 300 000: P <sup>3</sup> 5 000: P <sup>3</sup> 000: P <sup>3</sup> 16 300 300 300 300 300 300 300 30	Veraged 16.0% 17.5% 21.9% 21.9% 5.0% 00.0m 5.2% 15.3% 15.3% 15.3% 15.3% 15.3% 10.00m 15.3% 15.3% 10.00m 15.3% 1	1414, Brandson, 95%-CL 0.0911023, 0.256 0.0501024, 0.231 0.0511023, 0.256 0.0501024, 0.241 0.0511024, 0.051 0.0511024, 0.051 0.0511024, 0.051 0.0511024, 0.051 0.0511024, 0.051 0.0511023, 0.0511023, 0.051 0.0511023, 0.051	Paradar (Preuge Net) E Precent Paris Odds Ratio MA, Ranston, 95% O 10005 10	200
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Heinrogenet Turk - 0.50; Tests reveal offst 2.4.3. Sindy at Subarroy Annuaer, 2009 Annuaer, 2009 Annuaer, 2009 Annuaer, 2009 Annuaer, 2009 Liano, 2011 Manaba 2015 Madare, 2009 Liano, 2014 Manaba 2015 Madare, 2009 Liano, 2014 Manaba 2015 Carling, 2014 Liano, 2014 Manaba 2015 Carling, 2014 Manaba 2015 Manaba 2	Chr = 16.07 Preserver Powers	001) VII 755 756 756 757 757 757 757 757	7 (2 = 0). No NY 200 200 200 200 200 200 200 200	n Total 37 37 37 37 37 37 37 37 37 37	90%30% 16.0% 17.5% 0.0% 12.5% 0.0% 12.5% 0.0% 12.5% 0.0% 12.5% 0.0% 12.5% 13.7% 15.3% 15.3% 15.3% 15.3% 11.2% 15.3% 11.2% 15.3% 11.2% 15.3% 11.2% 15.3% 11.2% 11.2% 15.3% 11.2% 15.3% 11.2% 15.3% 11.2% 15.3% 11.2% 15.3% 11.2% 15.3% 15.3% 11.2% 15.3% 15.3% 15.3% 15.3% 11.2% 15.3%	Matk Reserves "Since Control of Control	Proved (Preve) Mill Encompany) MA, Ranston, 90% C MA, Ranston, 90% C 1000% 01 Freudy Mill Encompany Preved Mill Encompany 000% 01 Freudy Mill Encompany 00% 01 Freudy Mill Encompany	200

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# E. Second Vitrectomy



Study or Subgroup	Pre-op Events	Total	No IV Events	Total	Weight	Odds Ratio M-H, Fixed, 95% CI	Odds Ratio M-H, Fried, 95% Cl	
Atm 2011	3	36	3	34	0.0%	0.94 [0.18, 5.01]		
Arevalo 2019 di Lauro 2010	9	102	28	112	59.1% 6.3%	0.29 [0.13, 0.65] 0.23 [0.02, 2.72]		
El-Batarny 2008 Forohyash 2011	- 1	15	2	15	4.5%	0.46 [0.04, 5.75]		-
Hernandez-Da Mota 2010 Monabel 2015	1	20	4	20	9.2%	0.21 [0.02, 2.08] 0.12 [0.01, 1.08]	-	
Modarres 2009	ŝ	22	1	18	2.5%	0.81 (0.05, 13.92)		-2
Total (95% CI)		257	1	241	100,0%	0.29 [0,16, 0,54]	•	
Total events Heterogeneity: Chi#= 2.05, (			45 = 0%				601 05 1	0 100
Testför överall effect Z = 31	81 (P ≤ 0.0	1001)					Favours (Pre-op IVB) Favours (No	
Study or Subgroup	Pre-op Events	NH Total	No IV Events	R Total	Weight	Odds Ratio M-H, Fixed, 95% CI	Odds Ratio M-H, Fixed, 95% Cl	
Añn 2011	3	36	3	34	14.4%	0.94 [0.18, 5.01]	HALFACT AVAIL	
Anivalo 2019 di Lauro 2010	9	48	28	112	13.3%	0.29 [0.13, 0.65] 0.23 [0.02, 2.72]		
El Balarry 2008 Farañvash 2011	1	15	2	15	9.5% 4.8%	0.48 [0.04, 5.75]		_
Hormandez Cha Milita 2010	Ĵ.	20	4	20	19.3%	0 21 [0 02, 2 08]		
Manabe 2015 Modarres 2009	1	22	7	34	33.4%	0.12 (0.01, 1.00) 0.81 (0.05, 13.97)		-
Fotal (95% Ct)		191		163	100.0%	0.38 [0.17, 0.87]	-	
Fotal events Heterogeneity: Chi* = 3.29,1	9	11 1 20.1	20					
Test for overall effect Z= 1.	30 (P=0.0	(2)	0.36				0.01 0.1 ( Favours (Pte-op IVE) Favours (No	
	Pre-op		Notv			Odels Ratio	Odds Ratio	
Study or Subgroup the 2011	Events 2	Tutal 36	Events 2	Total 34	Weight 6.5%	M-H, Fixed, 95% Cl 0.54 [0.18, 5.01]	M-H, Foreit, 95% Cl	
vevalo 2019	9	102	28	112	58.8%	0,29 (0 13, 0 55)		
Si Launii 2010 Si-Balarny 2008	1	48	2	24 35	0.0%	0 23 [0.02, 2 77] 0.46 [0.04, 5 75]		
Farahvash 2011 Temandez-Da Mota 2010	1	18 20	1	18 20	2.3%	1 00 (0.08, 17 33) 0.21 (0.02, 2.00)		
Manabe 2019 Modarres 2009	1	37	7	34	15.9%	012[0.01, 1.08]		
	, L	22	1	18	2.5%	0.61 (0.05, 13 92)		-
Fotal (95% CI) Fotal events	17	245	46	251	100.0%	0.34 [0.19, 0.61]	•	
leterogeneity: Chi#= 3,54, 1 Test for overall effect: Z = 3,	df = 6 (P =						0 a1 a1 1	
sorren overall ellect 4 4 3)	Pre-ap		Notv			Odds Ralia	Eavours (Pre-op (VE) Eavours (No Odds Ratio	(VE)
Study or Subgroup	Events	Total	Events	Total	Weight	M-H, Fixed, 95% CF	M-AI, Fixed, 95% C)	
Ann 2011 Annala 2019	3	36	3 28	34	6.7% 57.7%	0.84 (0.18, 5 01) 0.29 (0.13, 0.65)		
di Lauro 2010	1	48	2	24	6.2%	0.23 [0.02, 2.72]		
51 Balarry 2008 Tatahvash 2011	1	15	2	16	2.2%	0.48 [0.04, 5.75] 1.00 (0.05, 17.33)		-
Homandez Da Mola 2010 Nanabe 2815	1	20 32	4	20	8 0%	0.71 [0.02, 2.08] 0.12 [0.01, 1.06]		
dodames 2009	Ť	22	÷.	18	2.5%	0.81 (0.05, 13 92)		-
total (95% Cl)		278		260	100,0%	0.33 [0.48, 0.59]	•	
Total events Heterogeneity: Chi? = 3.58, I	17 01 0 (P	U.73);	46				0.01 01 1	
Test for overall effect, $Z = 3$ .							0.01 0'1 1 Tavours Pre-op IVE) Favours INO	
	Pre-op		No IV			Odds Ratio	Odds Ratio	
Stady or Subgroup Atm 2011	Events 3	Total 36	Events 3	Total 34	Weight 8.5%	M-H, Fixed, 95% Cl 0.94 [0.18, 5.01]	M-H, Fixed, 95% CI	
Arevalo 2019 di Lauro 2010	9	102	28	112	56.5% 6.1%	0.29 [0.13, 0.65] 0.23 [0.62, 2.72]		
El-Datarny 2008 Fataltivistir 2011	1	15 18	3	15	4.3% 0.0%	0.46 (0.04, 5.75) 1.00 (0.06, 17.33)		
lemandez Da Mota 2010	1	20	4	20	8.8%	0.21 [0.02, 2.08]		
lemandez Da Mota 2010 Manadul 2015	ų T	20 37	4 7	20 34	8.8% 15.3%	0.21 [0.02, 2.08] 0.12 [0.01, 1.08]		
lemandez Da Mota 2010 Manatili 2014 Modarres 2009	1	20 37 22	4	20 34 18	8.8% 15.3% 2.4%	0.21 [0.02, 2.08] 0.12 [0.01, 1.08] 0.81 [0.05, 13.92]		-
Ternandez Da Mota 2010 Manatini 2015 Modarres 2009 Iotal (95% CI) Total events	1	20 37 22 275	4 7 1 47	20 34	8.8% 15.3%	0.21 [0.02, 2.08] 0.12 [0.01, 1.08]	•	1
lemandez Da Mots 2010 Manadmi 2015 Modarres 2009 Iotal (95% Cl) Iotal events Jeterogeneth: Chi#= 3.07, 1	1 1 1 1/ dr=6 (P=	20 37 22 275 0.90);	4 7 1 47	20 34 18	8.8% 15.3% 2.4%	0.21 [0.02, 2.08] 0.12 [0.01, 1.08] 0.81 [0.05, 13.92]		
lemandez Da Mots 2010 Manadmi 2015 Modarres 2009 Iotal (95% Cl) Iotal events Jeterogeneth: Chi#= 3.07, 1	1 1 1 01=6 (P= 83 (P= 0.0	20 32 22 275 0.80); 0.00);	4 7 1 47 *= 0%	20 34 18 257	8.8% 15.3% 2.4%	0.21 [0.02, 2.08] 0.12 [0.01, 1.08] 0.81 [0.05, 13.92] 0.32 [0,18, 0.57]	Favours (Ffe-tip IVB) Favours (No	
Temandez Da Mota 2010 Mancatar 2015 Mancatar 2015 (otal (95% CI) (otal events Telefolgeneth: Chi* = 3.07, Teleftor overall lifect $Z = 3.4$ Study or Subgroup	1 1 1 01=5 (P= 83 (P = 0.1 Pte-op Events	20 32 22 275 0.900; 1001) MB Total	4 7 1 47 *= 0% No IV Events	20 34 18 257 R. Total	8.8% 15.3% 2.4% 100,0% Weight	0.21 [0.02, 2.08] 0.12 [0.01, 1.08] 0.05 [0.05, 13.92] 0.32 [0.18, 0.57] Odds, Ratio M-II, Fixed, 95% C]	0.01 m3 Facors (Pfe-Ito Ivit) Famulas (No Ondes Ratio Mill, Tirret, 95% Cl	
Iemande: Da Mots 2010 Manual 2015 Manual 2015 Iotal (95% CI) Total events Ieterogeneith: Chif = 3.07, Iestfor overall affect Z # 3.0 Study or Subgroup Man 2011 Manual 2018	1 1 1/ 07=δ (P= 83 (P=0.1 Pte-op	20 37 22 275 0.90); 0001) TVB Total 36 102	4 7 1 47 *= 0%	20 34 18 257 R <u>Total</u> 34 112	6.8% 15.3% 2.4% 100,0% Weight 7.0% 80.5%	0.21 [0.02, 2.08] 0.12 [0.01, 1.08] 0.01 [0.05, 13.92] 0.32 [0,18, 0.57] 0.32 [0,18, 0.57] 0.44 [0.18, 0.55% CI 0.84 [0.18, 5.01] 0.29 [0.13, 0.85]	Favours (Ffe-tip IVE) Favours (No Ottos Ratio	
lensandes.Da Mets 2010 Maxami 2019 Notarres 2009 (otal (95% C1) fotal sents leftor overall diffect Z = 3.07, / leftor overall diffect Z = 3.1 Study of Subgroup an 2011 umxulu 2016 ( Lauro 2010	1 1 1 07=5 (P= 83 (P = 0.0 Pie-op Events 3	20 32 22 275 0.90); 1001) MR Total 36 102 48	4 7 1 47 *= 0% No IV Events 3	20 34 16 257 R Total 34	8.8% 15.3% 2.4% 100,0% Weight 7.0%	0.21 [0.02, 2.06] 0.12 [0.05, 1.08] 0.01 [0.05, 1.3.92] 0.32 [0.18, 0.57] Odds Ratio M4t, Fixed, 95% CI 0.84 [0.18, 5.01] 0.29 [0.13, 0.81] 0.29 [0.12, 0.27,21]	Favours (Ffe-tip IVE) Favours (No Ottos Ratio	
iemandez Da Mets 2010 Mordarres 2009 ofat (195% CI) fotal vents ieferogenehr. Chi*= 3.07, / iefertior overall effect Z = 3.0 Study or Sulingroup. Min 2011 Min 2011 El Autor 2010 El Autor 2010 El Autor 2010	1 1 1 0f=6 (P= 83 (P=0.0 83 (P=0.0 83 (P=0.0 9 Events 3 9 1 1 1	20 32 22 275 0.900; 0001) N/B Total 36 102 48 15 18	4 7 1 47 *= 0% No IV Events 28 28 22 7 1	20 34 16 257 R Total 34 112 24 15 18	8.8% 15.3% 2.4% 100.0% Weight 7.0% 80.5% 6.5% 4.8% 2.3%	0.21 (0.02, 2.06) 0.12 (0.01, 1.03) 0.01 (0.05, 1.1.32) 0.32 (0,18, 0.57) 0.32 (0,18, 0.57) 0.41 (0.18, 0.51) 0.44 (0.18, 0.51) 0.24 (0.13, 0.55) 0.29 (0.13, 0.55) 0.29 (0.13, 0.55) 0.29 (0.13, 0.55) 0.29 (0.13, 0.55) 0.29 (0.13, 0.55)	Favours (Ffe-tip IVE) Favours (No Ottos Ratio	
iemandez Da Mets 2010 Mordarres 2009 ofat (195% CI) róda vents ieletrogeneth: CIN*= 3.07, / leest for overall diffect Z = 3/- Study or Subgroup ternoll 2010 El Autor 2010 El Autor 2010 El Autor 2010 El Autor 2010 Hindung: Da Mala 2010 Hindung: Da Mala 2010	1 1 1 07=5 (P= 83 (P = 0.0 Pie-op Events 3	20 37 22 275 0.900; 0000; 0001) <b>IVB</b> <b>Total</b> 36 102 46 16 18 20 32	4 7 1 47 = 0% No IV Events 28 28 22 7 1 4 7	20 34 18 257 R Total 34 112 24 15 18 20 34	8.8% 15.3% 2.4% 100,0% 7.0% 80.5% 6.5% 4.7% 2.3% 16.4%	0.2110.02,2081 0172 (0147,108) 0.8110.05,12.921 0.3210,18,0.571 0.3210,18,0.571 0.41018,0.511 0.241018,0.511 0.241018,0.511 0.241013,0.651 0.2410012,721 0.461014,5731 0.211002,2781 0.020,64,17.331 0.211002,1781	Favours (Ffe-tip IVE) Favours (No Ottos Ratio	
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