

# NKR 04 PICO 10 Monofokal IOL vs Multifokal IOL

## Review information

### Authors

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Citation example: S. NKR 04 PICO 10 Monofokal IOL vs Multifokal IOL. Cochrane Database of Systematic Reviews [Year], Issue [Issue].

## Characteristics of studies

### Characteristics of included studies

#### *Alió 2011*

<b>Methods</b>	<p><b>Study design:</b> Randomized controlled trial</p> <p><b>Study grouping:</b> Parallel group</p>
<b>Participants</b>	<ul style="list-style-type: none"> <li>● <b>Baseline Characteristics</b></li> <li>● Intervention 1</li> <li>● Intervention 2</li> <li>● Intervention 3</li> <li>● Kontrol</li> <li>● Overall</li> <li>● <b>Included criteria:</b> The inclusion criteria were age older than 45 years and the need for bilateral cataract refractive surgery for presbyopia in the presence of significant nuclear sclerosis.</li> <li>● <b>Excluded criteria:</b> Exclusion criteria were active ocular disease and illiteracy.</li> </ul>
<b>Interventions</b>	<p><b>Intervention Characteristics</b></p> <p>Intervention 1</p> <ul style="list-style-type: none"> <li>● <i>Description:</i> Acrysof Restor SN6AD3 multifokal</li> <li>● <i>Duration:</i></li> <li>● <i>Followup time efter EoT:</i> 6 mdr</li> </ul> <p>Intervention 2</p> <ul style="list-style-type: none"> <li>● <i>Description:</i> Acri.Lisa 366D multifokal</li> <li>● <i>Duration:</i></li> <li>● <i>Followup time efter EoT:</i> 6 mdr</li> </ul> <p>Intervention 3</p> <ul style="list-style-type: none"> <li>● <i>Description:</i> Rezoom multifokal</li> <li>● <i>Duration:</i></li> <li>● <i>Followup time efter EoT:</i> 6 mdr</li> </ul> <p>Kontrol</p> <ul style="list-style-type: none"> <li>● <i>Description:</i> AcriSmart 48S monofokal</li> <li>● <i>Duration:</i></li> <li>● <i>Followup time efter EoT:</i> 6 mdr</li> </ul>

<b>Outcomes</b>	<i>Postoperativt UCDVA (mean)</i> ● <b>Outcome type:</b> ContinuousOutcome
<b>Notes</b>	

### Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias)	High risk	The lenses are inserted with different methods. Likely not possible to blind and this has not been described.
Blinding of outcome assessment (detection bias)	Unclear risk	Patients chose their subjectively convenient reading distance, allowing evaluation of everyday reading abilities
Incomplete outcome data (attrition bias)	Low risk	All participants seem to be included in the analysis, however not described.
Selective reporting (reporting bias)	Low risk	No protocol however relevant outcomes seem to be included.
Other bias	Low risk	The study seems to be free from other sources of bias.

### Cillino 2008

<b>Methods</b>	
<b>Participants</b>	
<b>Interventions</b>	
<b>Outcomes</b>	
<b>Notes</b>	For information on risk of bias see de Silva SR, Evans JR, Kirthi V, Ziaei M, Leyland M. Multifocal versus monofocal intraocular lenses after cataract extraction. Cochrane Database of Systematic Reviews 2016, Issue 12. Art. No.: CD003169. DOI: 10.1002/14651858.CD003169.pub4.

### Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	de Silva SR, et al
Allocation concealment (selection bias)	Low risk	de Silva SR, et al
Blinding of participants and personnel (performance bias)	Low risk	de Silva SR, et al
Blinding of outcome assessment (detection bias)	Low risk	de Silva SR, et al
Incomplete outcome data (attrition bias)	Unclear risk	de Silva SR, et al

Selective reporting (reporting bias)	Unclear risk	de Silva SR, et al
Other bias	Unclear risk	No judgement in Cochrane review

### *el Maghraby 1992*

<b>Methods</b>	
<b>Participants</b>	
<b>Interventions</b>	
<b>Outcomes</b>	
<b>Notes</b>	For information on risk of bias see de Silva SR, Evans JR, Kirthi V, Ziaei M, Leyland M. Multifocal versus monofocal intraocular lenses after cataract extraction. Cochrane Database of Systematic Reviews 2016, Issue 12. Art. No.: CD003169. DOI: 10.1002/14651858.CD003169.pub4.

### Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	de Silva SR, et al
Allocation concealment (selection bias)	Low risk	de Silva SR, et al
Blinding of participants and personnel (performance bias)	High risk	de Silva SR, et al
Blinding of outcome assessment (detection bias)	High risk	de Silva SR, et al
Incomplete outcome data (attrition bias)	High risk	de Silva SR, et al
Selective reporting (reporting bias)	Unclear risk	de Silva SR, et al
Other bias	Unclear risk	No judgement in Cochrane review

### *Haaskjold 1998a*

<b>Methods</b>	
<b>Participants</b>	
<b>Interventions</b>	
<b>Outcomes</b>	
<b>Notes</b>	

### Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	de Silva SR, et al
Allocation concealment (selection bias)	Low risk	de Silva SR, et al

Blinding of participants and personnel (performance bias)	High risk	de Silva SR, et al
Blinding of outcome assessment (detection bias)	High risk	de Silva SR, et al
Incomplete outcome data (attrition bias)	Unclear risk	de Silva SR, et al
Selective reporting (reporting bias)	Unclear risk	de Silva SR, et al
Other bias	Unclear risk	No judgement in Cochrane review

### Harman 2008

<b>Methods</b>	
<b>Participants</b>	
<b>Interventions</b>	
<b>Outcomes</b>	
<b>Notes</b>	

### Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	de Silva SR, et al
Allocation concealment (selection bias)	Low risk	de Silva SR, et al
Blinding of participants and personnel (performance bias)	High risk	de Silva SR, et al
Blinding of outcome assessment (detection bias)	Low risk	de Silva SR, et al
Incomplete outcome data (attrition bias)	Unclear risk	de Silva SR, et al
Selective reporting (reporting bias)	Unclear risk	de Silva SR, et al
Other bias	Unclear risk	No judgement in Cochrane review

### Javitt 2000

<b>Methods</b>	
<b>Participants</b>	
<b>Interventions</b>	
<b>Outcomes</b>	
<b>Notes</b>	

### Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	de Silva SR, et al
Allocation concealment (selection bias)	Unclear risk	de Silva SR, et al
Blinding of participants and personnel (performance bias)	Low risk	de Silva SR, et al
Blinding of outcome assessment (detection bias)	Low risk	de Silva SR, et al
Incomplete outcome data (attrition bias)	Unclear risk	de Silva SR, et al
Selective reporting (reporting bias)	Unclear risk	de Silva SR, et al
Other bias	Unclear risk	No judgement in Cochrane review

### Ji 2013

Methods	
Participants	
Interventions	
Outcomes	
Notes	

### Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	de Silva SR, et al
Allocation concealment (selection bias)	Unclear risk	de Silva SR, et al
Blinding of participants and personnel (performance bias)	High risk	de Silva SR, et al
Blinding of outcome assessment (detection bias)	High risk	de Silva SR, et al
Incomplete outcome data (attrition bias)	Unclear risk	de Silva SR, et al
Selective reporting (reporting bias)	Unclear risk	de Silva SR, et al
Other bias	Unclear risk	No judgement in Cochrane review

### Jusufovic 2011

Methods	
Participants	
Interventions	
Outcomes	
Notes	

## Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	de Silva SR, et al
Allocation concealment (selection bias)	Low risk	de Silva SR, et al
Blinding of participants and personnel (performance bias)	High risk	de Silva SR, et al
Blinding of outcome assessment (detection bias)	High risk	de Silva SR, et al
Incomplete outcome data (attrition bias)	Unclear risk	de Silva SR, et al
Selective reporting (reporting bias)	Unclear risk	de Silva SR, et al
Other bias	Unclear risk	No judgement in Cochrane review

**Kamlesh 2001**

<b>Methods</b>	
<b>Participants</b>	
<b>Interventions</b>	
<b>Outcomes</b>	
<b>Notes</b>	

## Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	de Silva SR, et al
Allocation concealment (selection bias)	High risk	de Silva SR, et al
Blinding of participants and personnel (performance bias)	High risk	de Silva SR, et al
Blinding of outcome assessment (detection bias)	High risk	de Silva SR, et al
Incomplete outcome data (attrition bias)	Unclear risk	de Silva SR, et al
Selective reporting (reporting bias)	Unclear risk	de Silva SR, et al
Other bias	Unclear risk	No judgement in Cochrane review

**Labiris 2015**

<b>Methods</b>	
<b>Participants</b>	
<b>Interventions</b>	
<b>Outcomes</b>	
<b>Notes</b>	

### Risk of bias table

<b>Bias</b>	<b>Authors' judgement</b>	<b>Support for judgement</b>
Random sequence generation (selection bias)	Low risk	de Silva SR, et al
Allocation concealment (selection bias)	Unclear risk	de Silva SR, et al
Blinding of participants and personnel (performance bias)	High risk	de Silva SR, et al
Blinding of outcome assessment (detection bias)	Unclear risk	de Silva SR, et al
Incomplete outcome data (attrition bias)	Unclear risk	de Silva SR, et al
Selective reporting (reporting bias)	Low risk	de Silva SR, et al
Other bias	Unclear risk	No judgement in Cochrane review

### *Leyland 2002*

<b>Methods</b>	
<b>Participants</b>	
<b>Interventions</b>	
<b>Outcomes</b>	
<b>Notes</b>	

### Risk of bias table

<b>Bias</b>	<b>Authors' judgement</b>	<b>Support for judgement</b>
Random sequence generation (selection bias)	Unclear risk	de Silva SR, et al
Allocation concealment (selection bias)	Low risk	de Silva SR, et al
Blinding of participants and personnel (performance bias)	Unclear risk	de Silva SR, et al
Blinding of outcome assessment (detection bias)	Low risk	de Silva SR, et al
Incomplete outcome data (attrition bias)	Unclear risk	de Silva SR, et al
Selective reporting (reporting bias)	Unclear risk	de Silva SR, et al
Other bias	Unclear risk	No judgement in Cochrane review

**Monaco 2017**

<b>Methods</b>	<b>Study design:</b> Randomized controlled trial <b>Study grouping:</b> Parallel group
<b>Participants</b>	<b>Baseline Characteristics</b> Intervention 1 Intervention 2 Intervention 3 Intervention 4 Kontrol Overall <b>Included criteria:</b> Inclusion criteria were lens opacity causing a reduction in visual quality and the motivation for spectacle independence <b>Excluded criteria:</b> Exclusion criteria were professional night drivers, pilots, and those with other occupations for whom induced dysphotopsia could put their career at risk; inability to cooperate; difficulties comprehending written or spoken language; ocular comorbidity that might hamper postoperative visual acuity; previous refractive surgery; pseudoexfoliation and/or zonular fiber weakness; optical biometry impractical because of dense cataract; axial lengths of 22.00 mm or shorter or 26.00 mm or longer; a mean central corneal power of 41.00 diopters (D) or lower or 46.00 D or higher; corneal astigmatism of 0.75 D or higher; an irregular astigmatism index of 0.54 or higher; root mean square (RMS) of corneal higher-order aberrations (HOAs) of 0.30 $\mu\text{m}$ or higher at a 4.0 mm pupil diameter; and angle k of 0.29 mm or higher. <b>Pretreatment:</b>
<b>Interventions</b>	<b>Intervention Characteristics</b> Intervention 1 <ul style="list-style-type: none"> <li>● <i>Description:</i> TFNT00 Acrysof Trifocal multifokal</li> <li>● <i>Duration:</i></li> <li>● <i>Followup time after EoT:</i> 4 mdr</li> </ul> Intervention 2 <ul style="list-style-type: none"> <li>● <i>Description:</i></li> <li>● <i>Duration:</i></li> <li>● <i>Followup time after EoT:</i></li> </ul> Intervention 3 <ul style="list-style-type: none"> <li>● <i>Description:</i></li> <li>● <i>Duration:</i></li> <li>● <i>Followup time after EoT:</i></li> </ul> Intervention 4 <ul style="list-style-type: none"> <li>● <i>Description:</i></li> <li>● <i>Duration:</i></li> <li>● <i>Followup time after EoT:</i></li> </ul> Kontrol <ul style="list-style-type: none"> <li>● <i>Description:</i> SN60WF Acrysof monofokal</li> <li>● <i>Duration:</i></li> <li>● <i>Followup time after EoT:</i> 4 mdr</li> </ul>



<b>Outcomes</b>	<p><i>Antal personer med adverse events</i></p> <ul style="list-style-type: none"> <li>● <b>Outcome type:</b> DichotomousOutcome</li> </ul> <p><i>Antal personer med optiske fænomener</i></p> <ul style="list-style-type: none"> <li>● <b>Outcome type:</b> DichotomousOutcome</li> </ul> <p><i>Postoperativt UCNVA (mean SD)</i></p> <ul style="list-style-type: none"> <li>● <b>Outcome type:</b> ContinuousOutcome</li> </ul> <p><i>Postoperativt UCNVA (Antal personer)</i></p> <ul style="list-style-type: none"> <li>● <b>Outcome type:</b> DichotomousOutcome</li> </ul> <p><i>Postoperativt UCDVA (mean)</i></p> <ul style="list-style-type: none"> <li>● <b>Outcome type:</b> ContinuousOutcome</li> </ul> <p><i>Postoperativt UCDVA (antal personer)</i></p> <ul style="list-style-type: none"> <li>● <b>Outcome type:</b> DichotomousOutcome</li> </ul> <p><i>Brilleafhængighed (any)</i></p> <ul style="list-style-type: none"> <li>● <b>Outcome type:</b> DichotomousOutcome</li> </ul>
<b>Notes</b>	

Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Judgement Comment: Randomization by minimization program
Allocation concealment (selection bias)	Unclear risk	Judgement Comment: No information
Blinding of participants and personnel (performance bias)	Low risk	Patient's were blinded. It is not stated wheter surgeons were blinded or not
Blinding of outcome assessment (detection bias)	Low risk	Examiners were blinded
Incomplete outcome data (attrition bias)	Low risk	no missing outcome data
Selective reporting (reporting bias)	Low risk	Judgement Comment: Ingen protokol. Det ser dog ud til at alle relevante outcomes er rapporteret.
Other bias	Low risk	Judgement Comment: The study appears to be free of other sources of bias

**Nijkamp 2004**

<b>Methods</b>	
<b>Participants</b>	
<b>Interventions</b>	
<b>Outcomes</b>	
<b>Notes</b>	

## Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	de Silva SR, et al
Allocation concealment (selection bias)	Low risk	de Silva SR, et al
Blinding of participants and personnel (performance bias)	High risk	de Silva SR, et al
Blinding of outcome assessment (detection bias)	High risk	de Silva SR, et al
Incomplete outcome data (attrition bias)	High risk	de Silva SR, et al
Selective reporting (reporting bias)	Unclear risk	de Silva SR, et al
Other bias	Unclear risk	No judgement in Cochrane review

**Palmer 2008**

<b>Methods</b>	
<b>Participants</b>	
<b>Interventions</b>	
<b>Outcomes</b>	
<b>Notes</b>	

## Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	de Silva SR, et al
Allocation concealment (selection bias)	High risk	de Silva SR, et al
Blinding of participants and personnel (performance bias)	Unclear risk	de Silva SR, et al
Blinding of outcome assessment (detection bias)	Unclear risk	de Silva SR, et al
Incomplete outcome data (attrition bias)	Unclear risk	de Silva SR, et al
Selective reporting (reporting bias)	Unclear risk	de Silva SR, et al
Other bias	Unclear risk	No judgement in Cochrane review

**Peng 2012**

<b>Methods</b>	
<b>Participants</b>	
<b>Interventions</b>	
<b>Outcomes</b>	
<b>Notes</b>	

### Risk of bias table

<b>Bias</b>	<b>Authors' judgement</b>	<b>Support for judgement</b>
Random sequence generation (selection bias)	Unclear risk	de Silva SR, et al
Allocation concealment (selection bias)	Low risk	de Silva SR, et al
Blinding of participants and personnel (performance bias)	Unclear risk	de Silva SR, et al
Blinding of outcome assessment (detection bias)	Unclear risk	de Silva SR, et al
Incomplete outcome data (attrition bias)	Low risk	de Silva SR, et al
Selective reporting (reporting bias)	Unclear risk	de Silva SR, et al
Other bias	Unclear risk	No judgement in Cochrane review

### *Percival 1993*

<b>Methods</b>	
<b>Participants</b>	
<b>Interventions</b>	
<b>Outcomes</b>	
<b>Notes</b>	

### Risk of bias table

<b>Bias</b>	<b>Authors' judgement</b>	<b>Support for judgement</b>
Random sequence generation (selection bias)	Unclear risk	de Silva SR, et al
Allocation concealment (selection bias)	Unclear risk	de Silva SR, et al
Blinding of participants and personnel (performance bias)	High risk	de Silva SR, et al
Blinding of outcome assessment (detection bias)	High risk	de Silva SR, et al
Incomplete outcome data (attrition bias)	High risk	de Silva SR, et al
Selective reporting (reporting bias)	Unclear risk	de Silva SR, et al
Other bias	Unclear risk	No judgement in Cochrane review

**Rasp 2012**

<b>Methods</b>	
<b>Participants</b>	
<b>Interventions</b>	
<b>Outcomes</b>	
<b>Notes</b>	

## Risk of bias table

<b>Bias</b>	<b>Authors' judgement</b>	<b>Support for judgement</b>
Random sequence generation (selection bias)	Unclear risk	de Silva SR, et al
Allocation concealment (selection bias)	Unclear risk	de Silva SR, et al
Blinding of participants and personnel (performance bias)	High risk	de Silva SR, et al
Blinding of outcome assessment (detection bias)	Unclear risk	de Silva SR, et al
Incomplete outcome data (attrition bias)	Unclear risk	de Silva SR, et al
Selective reporting (reporting bias)	Unclear risk	de Silva SR, et al
Other bias	Unclear risk	No judgement in Cochrane review

**Rossetti 1994**

<b>Methods</b>	
<b>Participants</b>	
<b>Interventions</b>	
<b>Outcomes</b>	
<b>Notes</b>	

## Risk of bias table

<b>Bias</b>	<b>Authors' judgement</b>	<b>Support for judgement</b>
Random sequence generation (selection bias)	Unclear risk	de Silva SR, et al
Allocation concealment (selection bias)	Unclear risk	de Silva SR, et al
Blinding of participants and personnel (performance bias)	High risk	de Silva SR, et al
Blinding of outcome assessment (detection bias)	High risk	de Silva SR, et al
Incomplete outcome data (attrition bias)	Unclear risk	de Silva SR, et al
Selective reporting (reporting bias)	Unclear risk	de Silva SR, et al

Other bias	Unclear risk	No judgement in Cochrane review
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### Sen 2004

Methods	
Participants	
Interventions	
Outcomes	
Notes	

### Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	de Silva SR, et al
Allocation concealment (selection bias)	Unclear risk	de Silva SR, et al
Blinding of participants and personnel (performance bias)	High risk	de Silva SR, et al
Blinding of outcome assessment (detection bias)	High risk	de Silva SR, et al
Incomplete outcome data (attrition bias)	High risk	de Silva SR, et al
Selective reporting (reporting bias)	Unclear risk	de Silva SR, et al
Other bias	Unclear risk	No judgement in Cochrane review

### Shah 2015

Methods	<p><b>Study design:</b> Randomized controlled trial</p> <p><b>Study grouping:</b> Parallel group</p>
Participants	<p><b>Baseline Characteristics</b></p> <p>Intervention 1 Intervention 2 Intervention 3 Intervention 4 Kontrol Overall</p> <p><b>Included criteria:</b> Eligible patients were either nonastigmatic or were astigmatic with preoperative regular corneal astigmatism of 2.5 diopters (D) or less, with otherwise healthy eyes, and were available to undergo cataract removal in the second eye 6 weeks or less after the first eye surgery. Additionally, it was required that both eyes meet qualification criteria for onlabel implantation of the AcrySof IQ ReSTOR family of IOLs</p> <p><b>Excluded criteria:</b> Key exclusion criteria included previous corneal surgery or corneal reshaping, corneal abnormalities, conditions or diseases that contraindicated implantation of atoric IOL, or planned multiple procedures during phacoemulsification and IOL implantation surgery.</p>

<p><b>Interventions</b></p>	<p><b>Pretreatment:</b></p> <p><b>Intervention Characteristics</b></p> <p>Intervention 1</p> <ul style="list-style-type: none"> <li>● <i>Description:</i> Acrysof IQ Restor toric or nontoric multifocal iol</li> <li>● <i>Duration:</i></li> <li>● <i>Followup time efter EoT:</i> 6 mdr</li> </ul> <p>Intervention 2</p> <ul style="list-style-type: none"> <li>● <i>Description:</i></li> <li>● <i>Duration:</i></li> <li>● <i>Followup time efter EoT:</i></li> </ul> <p>Intervention 3</p> <ul style="list-style-type: none"> <li>● <i>Description:</i></li> <li>● <i>Duration:</i></li> <li>● <i>Followup time efter EoT:</i></li> </ul> <p>Intervention 4</p> <ul style="list-style-type: none"> <li>● <i>Description:</i></li> <li>● <i>Duration:</i></li> <li>● <i>Followup time efter EoT:</i></li> </ul> <p>Kontrol</p> <ul style="list-style-type: none"> <li>● <i>Description:</i> commercially available nontoric monofocal iols</li> <li>● <i>Duration:</i></li> <li>● <i>Followup time efter EoT:</i> 6 mdr</li> </ul>
<p><b>Outcomes</b></p>	<p><i>Antal personer med adverse events</i></p> <ul style="list-style-type: none"> <li>● <b>Outcome type:</b> DichotomousOutcome</li> </ul> <p><i>Antal personer med optiske fænomener</i></p> <ul style="list-style-type: none"> <li>● <b>Outcome type:</b> DichotomousOutcome</li> </ul> <p><i>Postoperativt UCNVA (mean SD)</i></p> <ul style="list-style-type: none"> <li>● <b>Outcome type:</b> ContinuousOutcome</li> </ul> <p><i>Postoperativt UCNVA (Antal personer)</i></p> <ul style="list-style-type: none"> <li>● <b>Outcome type:</b> DichotomousOutcome</li> </ul> <p><i>Postoperativt UCDVA (mean)</i></p> <ul style="list-style-type: none"> <li>● <b>Outcome type:</b> ContinuousOutcome</li> </ul> <p><i>Postoperativt UCDVA (antal personer)</i></p> <ul style="list-style-type: none"> <li>● <b>Outcome type:</b> DichotomousOutcome</li> </ul> <p><i>Brilleafhængighed (any)</i></p> <ul style="list-style-type: none"> <li>● <b>Outcome type:</b> DichotomousOutcome</li> </ul>
<p><b>Notes</b></p>	

### Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Judgement Comment: No information of how the allocation sequence was generated
Allocation concealment (selection bias)	Unclear risk	Judgement Comment: No information
Blinding of participants and personnel (performance bias)	Low risk	Judgement Comment: patienter var blindede, operatør var ikke blindet. Side 660 første spalte lige over afsnittet Safety Assessments
Blinding of outcome assessment (detection bias)	Low risk	Judgement Comment: The observer-technicians who measured vision acuity and refraction were blinded for lens information
Incomplete outcome data (attrition bias)	Low risk	Judgement Comment: Der redegøres for frafald i de to grupper. Frafald fordelt ensartet mellem grupperne, årsager til frafald angivet. Har ITT analyser der inkluderer alle der har fået præcenteret eller implanteret den linse de blev randomiseret til.
Selective reporting (reporting bias)	Low risk	Judgement Comment: Protokol på Clinical trials. Det ser ud til at alle outcomes of interests er rapporteret som beskrevet i protokollen. Rapporterer på UCNVA, UCDVA, brille uafhængighed, quality of life, (optiske fænomener er inkluderet i QOL-skala) samt adverse events.
Other bias	Low risk	Judgement Comment: The study appears to be free of other sources of bias

### Steinert 1992

Methods	
Participants	
Interventions	
Outcomes	
Notes	

### Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	de Silva SR, et al
Allocation concealment (selection bias)	Unclear risk	de Silva SR, et al
Blinding of participants and personnel (performance bias)	Low risk	de Silva SR, et al
Blinding of outcome assessment (detection bias)	Low risk	de Silva SR, et al
Incomplete outcome data (attrition bias)	High risk	de Silva SR, et al

Selective reporting (reporting bias)	Unclear risk	de Silva SR, et al
Other bias	Unclear risk	No judgement in Cochrane review

### Wilkins 2013

<b>Methods</b>	
<b>Participants</b>	
<b>Interventions</b>	
<b>Outcomes</b>	
<b>Notes</b>	

### Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	de Silva SR, et al
Allocation concealment (selection bias)	Low risk	de Silva SR, et al
Blinding of participants and personnel (performance bias)	Low risk	de Silva SR, et al
Blinding of outcome assessment (detection bias)	High risk	de Silva SR, et al
Incomplete outcome data (attrition bias)	Low risk	de Silva SR, et al
Selective reporting (reporting bias)	High risk	de Silva SR, et al
Other bias	Unclear risk	No judgement in Cochrane review

### Zhao 2010

<b>Methods</b>	
<b>Participants</b>	
<b>Interventions</b>	
<b>Outcomes</b>	
<b>Notes</b>	

### Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	de Silva SR, et al
Allocation concealment (selection bias)	Unclear risk	de Silva SR, et al
Blinding of participants and personnel (performance bias)	Unclear risk	de Silva SR, et al



Blinding of outcome assessment (detection bias)	Low risk	de Silva SR, et al
Incomplete outcome data (attrition bias)	Unclear risk	de Silva SR, et al
Selective reporting (reporting bias)	Unclear risk	de Silva SR, et al
Other bias	Unclear risk	No judgement in Cochrane review

Footnotes

## References to studies

### Included studies

#### ***Alió 2011***

[Empty]

#### ***Cillino 2008***

[Empty]

#### ***el Maghraby 1992***

[Empty]

#### ***Haaskjold 1998a***

[Empty]

#### ***Harman 2008***

[Empty]

#### ***Javitt 2000***

[Empty]

#### ***Ji 2013***

[Empty]

#### ***Jusufovic 2011***

[Empty]

#### ***Kamlesh 2001***

[Empty]

#### ***Labiris 2015***

[Empty]

#### ***Leyland 2002***

[Empty]

**Monaco 2017**

Monaco G.; Gari M.; Di Censo F.; Poscia A.; Ruggi G.; Scialdone, A.. Visual performance after bilateral implantation of 2 new presbyopia-correcting intraocular lenses: Trifocal versus extended range of vision.. Journal of cataract and refractive surgery 2017;43(6):737-747. [DOI: ]

**Nijkamp 2004**

[Empty]

**Palmer 2008**

[Empty]

**Peng 2012**

[Empty]

**Percival 1993**

[Empty]

**Rasp 2012**

[Empty]

**Rossetti 1994**

[Empty]

**Sen 2004**

[Empty]

**Shah 2015**

Shah S.; PerisMartinez C.; Reinhard T.; Vinciguerra, P.. Visual outcomes after cataract surgery: Multifocal versus monofocal intraocular lenses.. Journal of Refractive Surgery 2015;31(10):658-664. [DOI: ]

**Steinert 1992**

[Empty]

**Wilkins 2013**

[Empty]

**Zhao 2010**

[Empty]

**Data and analyses****1 Multifocal versus monofocal intraocular lenses**

Outcome or Subgroup	Studies	Participants	Statistical Method	Effect Estimate
1.1 Adverse events, number of people unless otherwise stated	7	1037	Risk Ratio (M-H, Random, 95% CI)	1.06 [0.54, 2.09]

1.2 Mean unaided distance VA [logMAR]	9	1418	Mean Difference (IV, Random, 95% CI [logMAR])	0.01 [-0.02, 0.04]
1.2.1 Binoculær emmetropi	8	1232	Mean Difference (IV, Random, 95% CI [logMAR])	0.01 [-0.02, 0.04]
1.2.2 Monovision	1	186	Mean Difference (IV, Random, 95% CI [logMAR])	0.02 [-0.02, 0.06]
1.7 Mean unaided near VA [logMAR]	7	1095	Mean Difference (IV, Random, 95% CI [logMAR])	-0.22 [-0.37, -0.06]
1.7.1 Binoculær emmetropi	6	909	Mean Difference (IV, Random, 95% CI [logMAR])	-0.25 [-0.39, -0.10]
1.7.2 Monovision	1	186	Mean Difference (IV, Random, 95% CI [logMAR])	-0.04 [-0.08, -0.00]
1.10 Spectacle dependence (any)	14	1498	Risk Ratio (M-H, Random, 95% CI)	0.54 [0.45, 0.65]
1.10.1 Binoculær emmetropi	12	1236	Risk Ratio (M-H, Random, 95% CI)	0.57 [0.47, 0.68]
1.10.2 Monovision	2	262	Risk Ratio (M-H, Random, 95% CI)	0.40 [0.30, 0.53]
1.12 Contrast sensitivity	5	507	Std. Mean Difference (IV, Random, 95% CI)	-0.22 [-0.40, -0.05]
1.12.1 Binoculær emmetropi	3	245	Std. Mean Difference (IV, Random, 95% CI)	-0.19 [-0.44, 0.06]
1.12.2 Monovision	2	262	Std. Mean Difference (IV, Random, 95% CI)	-0.19 [-0.63, 0.24]
1.13 Participant-reported outcomes: visual function questionnaires	4	480	Mean Difference (IV, Random, 95% CI)	3.09 [-2.77, 8.96]
1.14 Participant-reported outcomes: vision-related quality-of-life questionnaires	1	137	Mean Difference (IV, Fixed, 95% CI)	0.00 [-0.15, 0.15]
1.19 Participant-reported outcomes: glare	8	731	Risk Ratio (M-H, Random, 95% CI)	1.41 [1.18, 1.68]
1.19.1 Binoculær emmetropi	7	544	Risk Ratio (M-H, Random, 95% CI)	1.41 [1.03, 1.93]
1.19.2 Monovision	1	187	Risk Ratio (M-H, Random, 95% CI)	1.41 [1.14, 1.73]
1.20 Participant-reported outcomes: haloes	7	662	Risk Ratio (M-H, Random, 95% CI)	3.58 [1.99, 6.46]

## Figures

Figure 1 (Analysis 1.2)

Study or Subgroup	Multifocal			Monofocal			Weight	Mean Diff, Random, 95% CI
	Mean [logMAR]	SD [logMAR]	Total	Mean [logMAR]	SD [logMAR]	Total		
<b>1.2.1 Binoculær emmetropi</b>								
Leyland 2002 (1)	0.0736	0.1201	44	0.03	0.12	16	7.8%	0
Nijkamp 2004 (2)	0.13	0.2	68	0.16	0.2	69	8.0%	-0
Harman 2008 (3)	0.07	0.13	24	0.08	0.1	19	7.8%	-0
Palmer 2008 (4)	0.1587	0.1145	90	0.13	0.09	24	11.5%	0
Alió 2011 (5)	0.1301	0.12	232	0.09	0.15	72	12.4%	0
Peng 2012 (6)	0.03	0.14	100	0.08	0.15	102	12.1%	-0
Rasp 2012 (7)	0.1347	0.1106	234	0.08	0.11	58	13.5%	0
Monaco 2017	0	0.04	40	0.02	0.06	40	14.9%	-0
<b>Subtotal (95% CI)</b>			<b>832</b>			<b>400</b>	<b>88.1%</b>	<b>0</b>
Heterogeneity: Tau <sup>2</sup> = 0.00; Chi <sup>2</sup> = 28.43, df = 7 (P = 0.0002); I <sup>2</sup> = 75%								
Test for overall effect: Z = 0.51 (P = 0.61)								
<b>1.2.2 Monovision</b>								
Wilkins 2013	0.08	0.12	94	0.06	0.16	92	11.9%	0
<b>Subtotal (95% CI)</b>			<b>94</b>			<b>92</b>	<b>11.9%</b>	<b>0</b>
Heterogeneity: Not applicable								
Test for overall effect: Z = 0.96 (P = 0.34)								
<b>Total (95% CI)</b>			<b>926</b>			<b>492</b>	<b>100.0%</b>	<b>0</b>
Heterogeneity: Tau <sup>2</sup> = 0.00; Chi <sup>2</sup> = 28.91, df = 8 (P = 0.0003); I <sup>2</sup> = 72%								
Test for overall effect: Z = 0.69 (P = 0.49)								
Test for subgroup differences: Chi <sup>2</sup> = 0.23, df = 1 (P = 0.63), I <sup>2</sup> = 0%								

### Footnotes

- (1) 3 months, binocular
- (2) 3 months, unclear whether eyes/people reported
- (3) 18 months, binocular
- (4) 3 months, binocular
- (5) 6 mdr, binoculær
- (6) 6 months, binocular
- (7) 12 months, unclear whether eyes/people reported

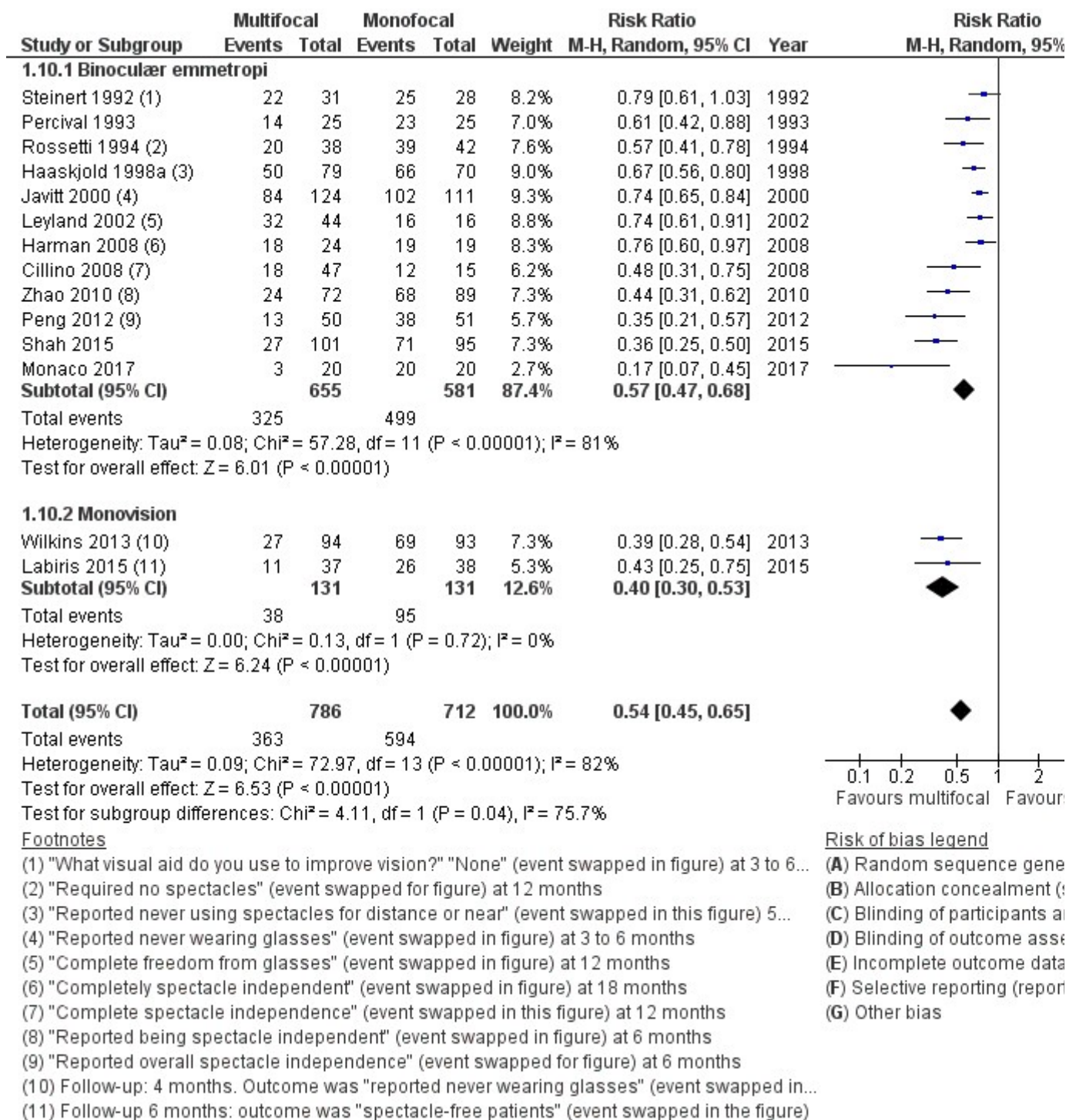
Forest plot of comparison: 1 Multifocal versus monofocal intraocular lenses, outcome: 1.2 Mean unaided distance VA [logMAR].

Figure 2 (Analysis 1.7)

Study or Subgroup	Multifocal			Monofocal			Weight	IV, Random, 95% CI	
	Mean [logMAR]	SD [logMAR]	Total	Mean [logMAR]	SD [logMAR]	Total			
<b>1.7.1 Binocular emmetropi</b>									
Javitt 2000 (1)	0.11	0.14	123	0.3	0.22	109	14.4%	-0.1	
Leyland 2002 (2)	0.443	0.1816	44	0.46	0.16	16	13.8%	-0.1	
Harman 2008 (3)	0.49	0.15	24	0.64	0.12	19	14.0%	-0.1	
Rasp 2012 (4)	0.3	0.15	234	0.47	0.15	58	14.4%	-0.1	
Peng 2012 (5)	0.07	0.07	100	0.64	0.21	102	14.4%	-0.1	
Monaco 2017	0.02	0.06	40	0.38	0.1	40	14.5%	-0.1	
<b>Subtotal (95% CI)</b>			<b>565</b>			<b>344</b>	<b>85.5%</b>	<b>-0.1</b>	
Heterogeneity: Tau <sup>2</sup> = 0.03; Chi <sup>2</sup> = 263.74, df = 5 (P < 0.00001); I <sup>2</sup> = 98%									
Test for overall effect: Z = 3.22 (P = 0.001)									
<b>1.7.2 Monovision</b>									
Wilkins 2013	-0.03	0.13	94	0.01	0.12	92	14.5%	-0.1	
<b>Subtotal (95% CI)</b>			<b>94</b>			<b>92</b>	<b>14.5%</b>	<b>-0.1</b>	
Heterogeneity: Not applicable									
Test for overall effect: Z = 2.18 (P = 0.03)									
<b>Total (95% CI)</b>			<b>659</b>				<b>436</b>	<b>100.0%</b>	<b>-0.1</b>
Heterogeneity: Tau <sup>2</sup> = 0.04; Chi <sup>2</sup> = 427.37, df = 6 (P < 0.00001); I <sup>2</sup> = 99%									
Test for overall effect: Z = 2.80 (P = 0.005)									
Test for subgroup differences: Chi <sup>2</sup> = 6.88, df = 1 (P = 0.009), I <sup>2</sup> = 85.5%									
<u>Footnotes</u>									
(1) 3 months, binocular									
(2) 3 months, binocular									
(3) 18 months, binocular									
(4) 12 months, unclear whether eyes/people reported									
(5) 6 months, binocular									

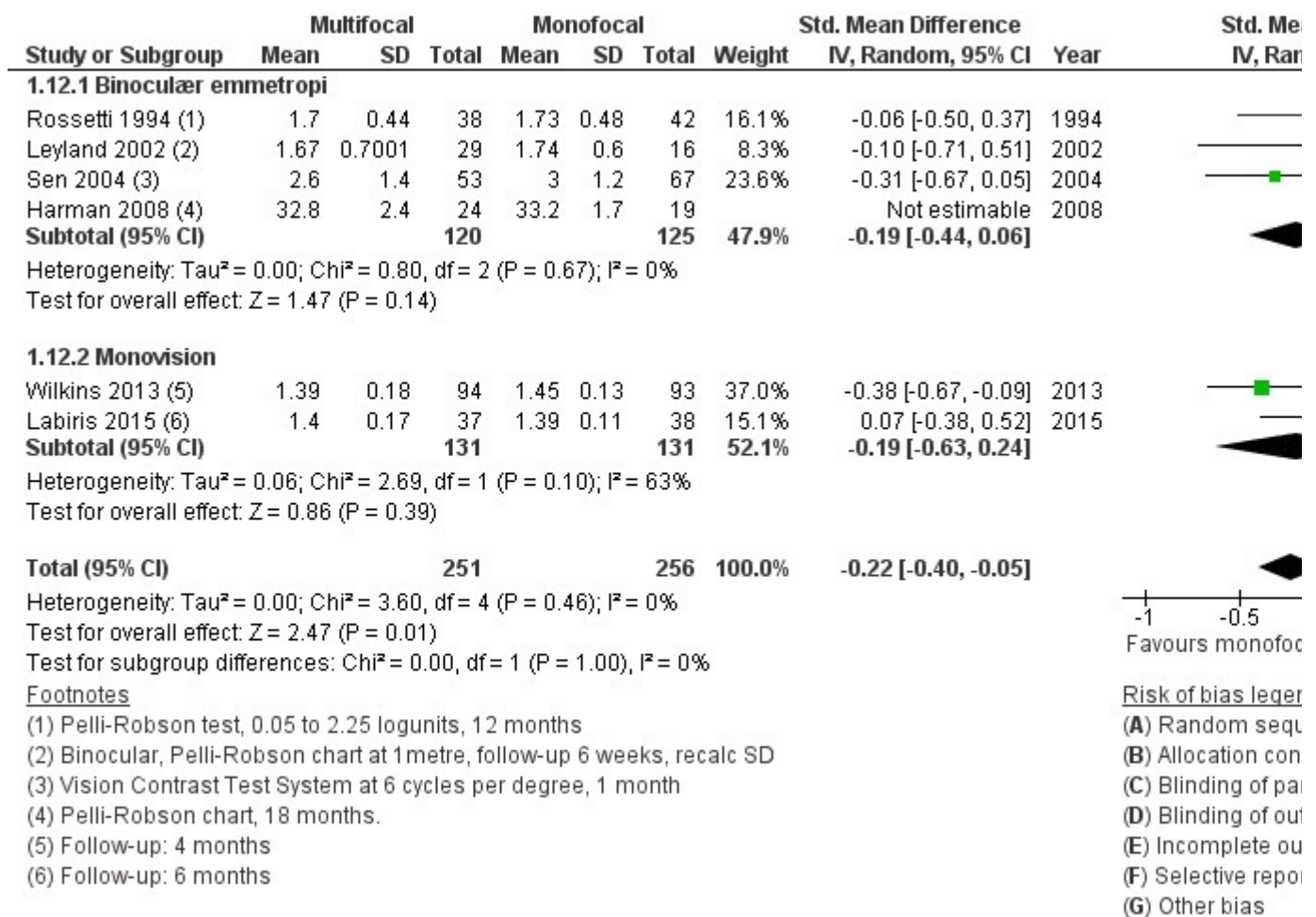
Forest plot of comparison: 1 Multifocal versus monofocal intraocular lenses, outcome: 1.7 Mean unaided near VA [logMAR].

### Figure 3 (Analysis 1.10)



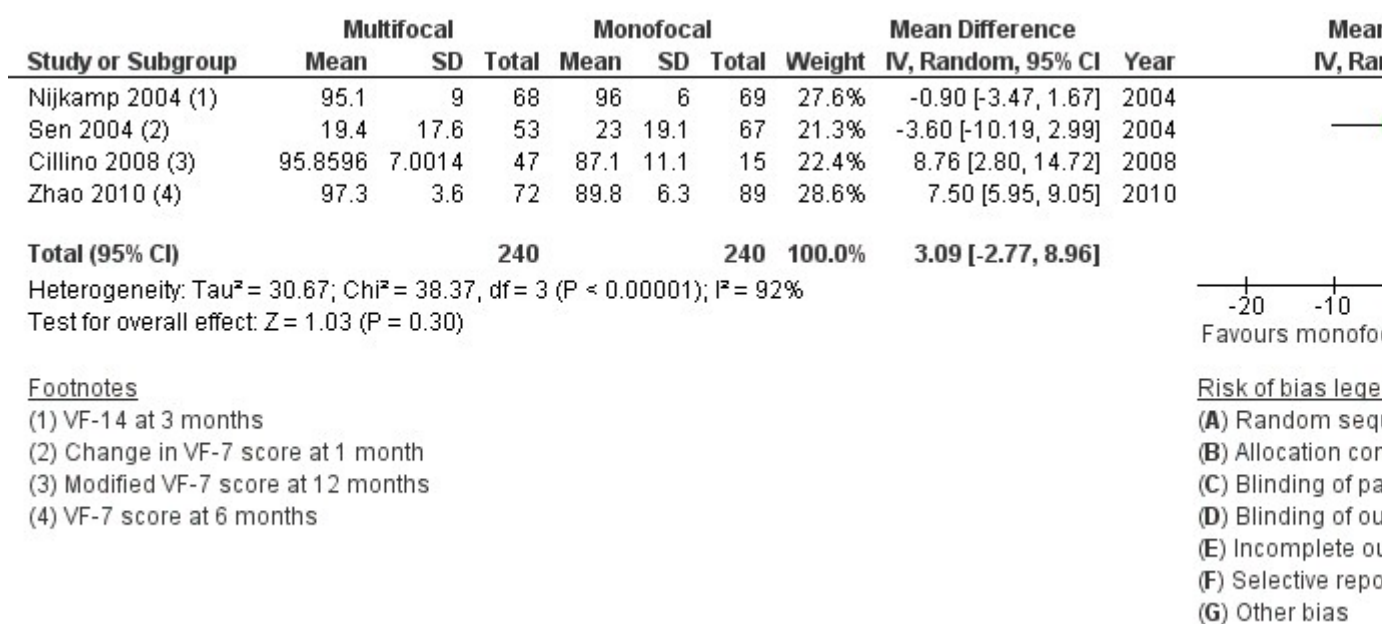
Forest plot of comparison: 1 Multifocal versus monofocal intraocular lenses, outcome: 1.10 Spectacle dependence (any).

**Figure 4 (Analysis 1.12)**



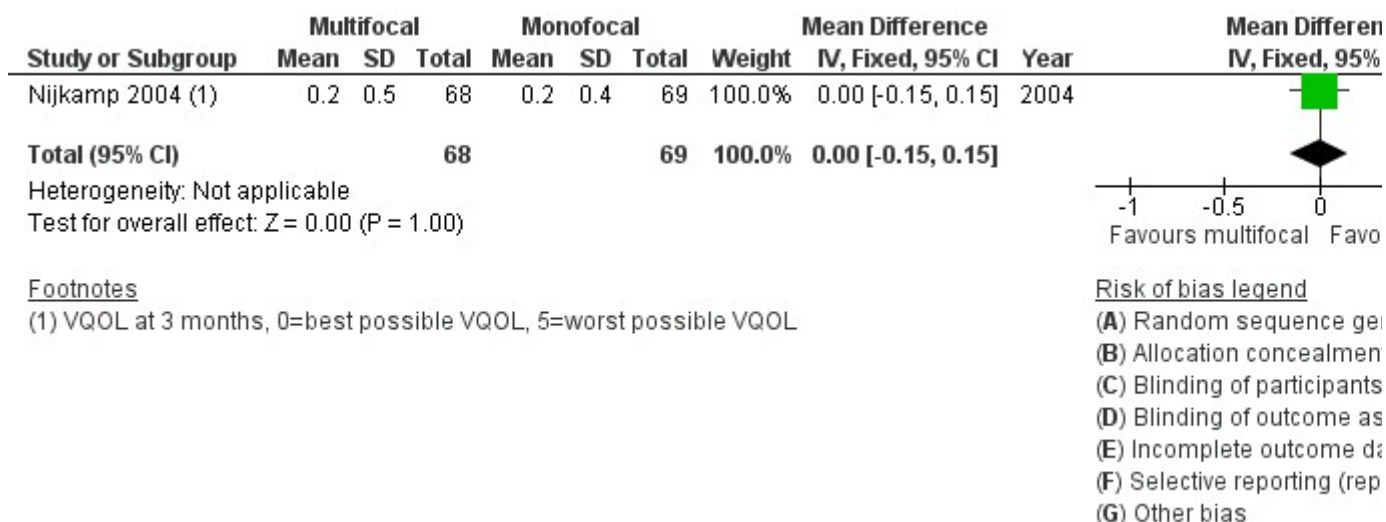
Forest plot of comparison: 1 Multifocal versus monofocal intraocular lenses, outcome: 1.12 Contrast sensitivity.

**Figure 5 (Analysis 1.13)**



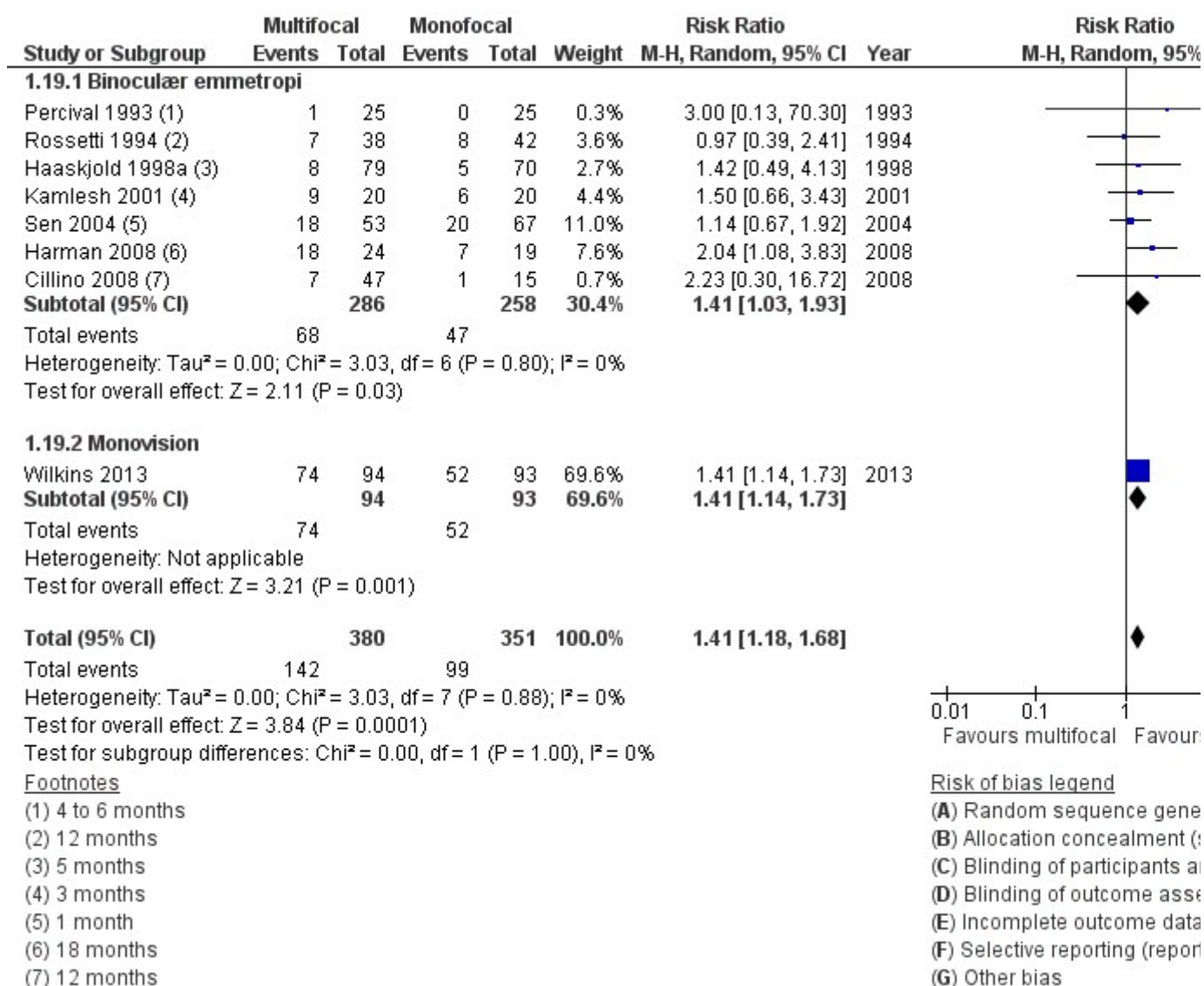
Forest plot of comparison: 1 Multifocal versus monofocal intraocular lenses, outcome: 1.13 Participant-reported outcomes: visual function questionnaires.

**Figure 6 (Analysis 1.14)**



Forest plot of comparison: 1 Multifocal versus monofocal intraocular lenses, outcome: 1.14  
Participant-reported outcomes: vision-related quality-of-life questionnaires.

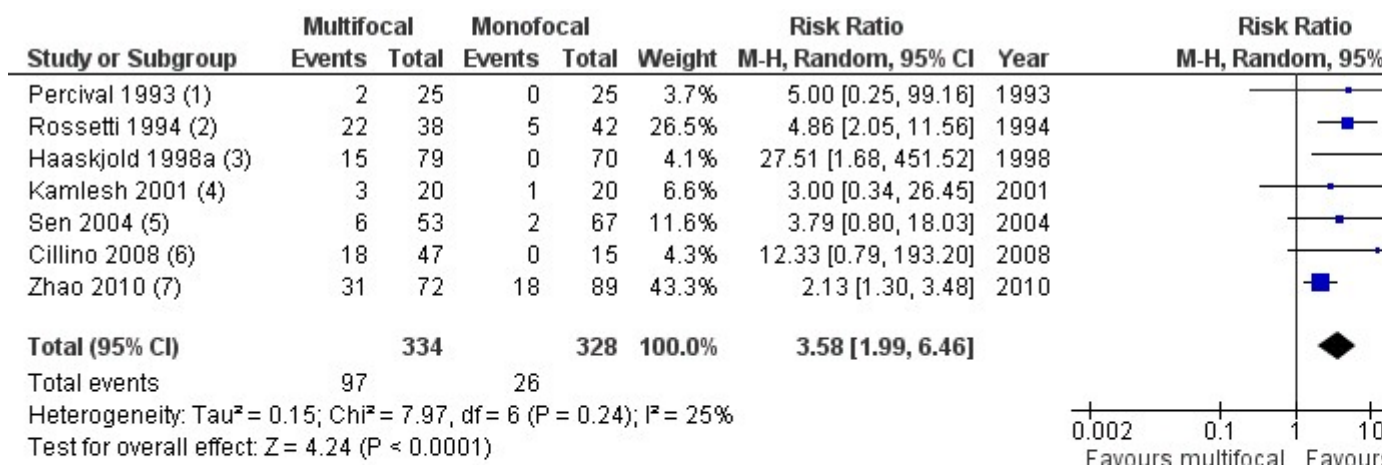
**Figure 7 (Analysis 1.19)**





Forest plot of comparison: 1 Multifocal versus monofocal intraocular lenses, outcome: 1.19  
 Participant-reported outcomes: glare.

**Figure 8 (Analysis 1.20)**



Footnotes

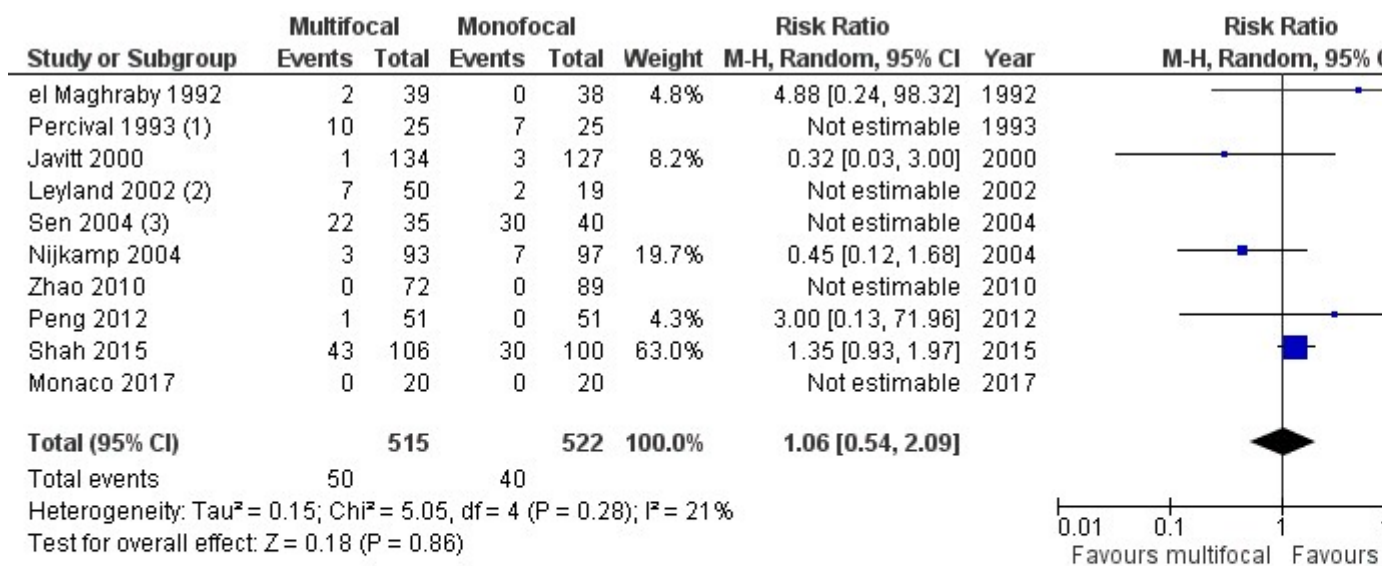
- (1) 4 to 6 months
- (2) 12 months
- (3) 5 months
- (4) 3 months
- (5) 1 month
- (6) 12 months
- (7) 6 months

Risk of bias legend

- (A) Random sequence gene
- (B) Allocation concealment (:
- (C) Blinding of participants a
- (D) Blinding of outcome asse
- (E) Incomplete outcome data
- (F) Selective reporting (report
- (G) Other bias

Forest plot of comparison: 1 Multifocal versus monofocal intraocular lenses, outcome: 1.20  
 Participant-reported outcomes: haloes.

**Figure 9 (Analysis 1.1)**



**Risk of bias legend**

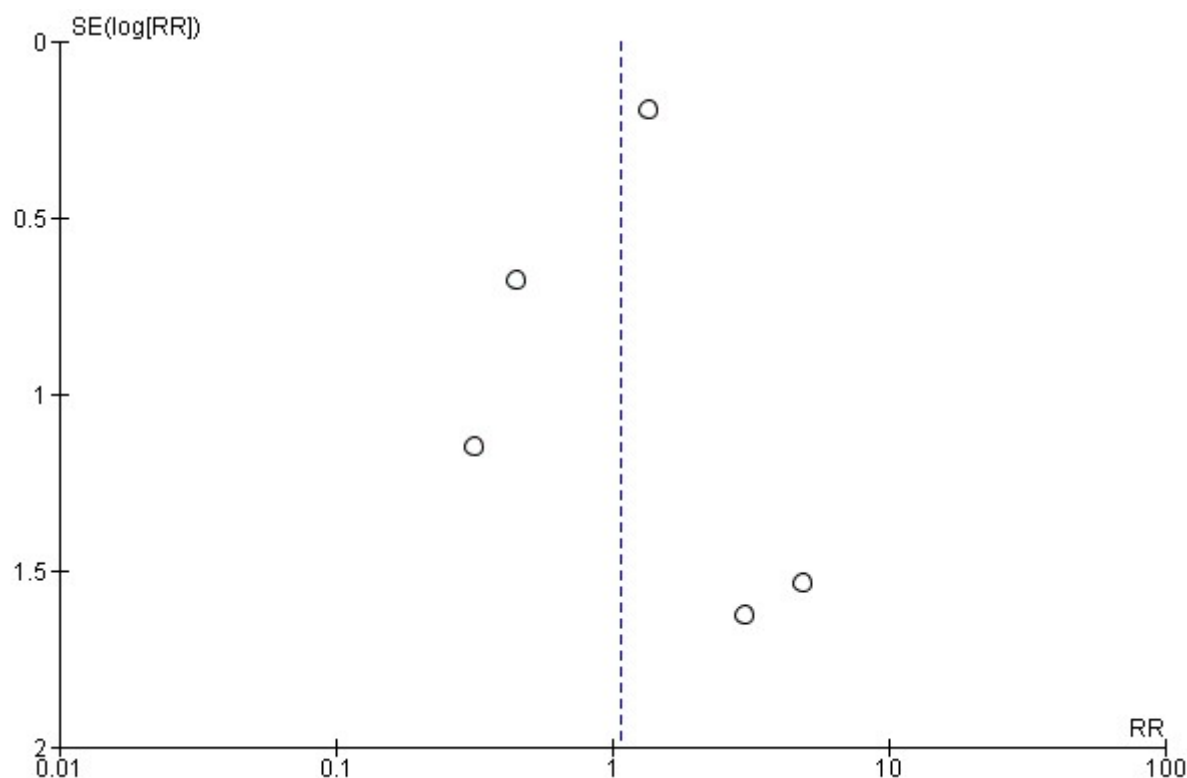
- (A) Random sequence generation
- (B) Allocation concealment (signature)
- (C) Blinding of participants and personnel
- (D) Blinding of outcome assessment
- (E) Incomplete outcome data
- (F) Selective reporting (reporting bias)
- (G) Other bias

**Footnotes**

- (1) Antal komplikationer
- (2) Antal events
- (3) Antal komplikationer (øjniveau)

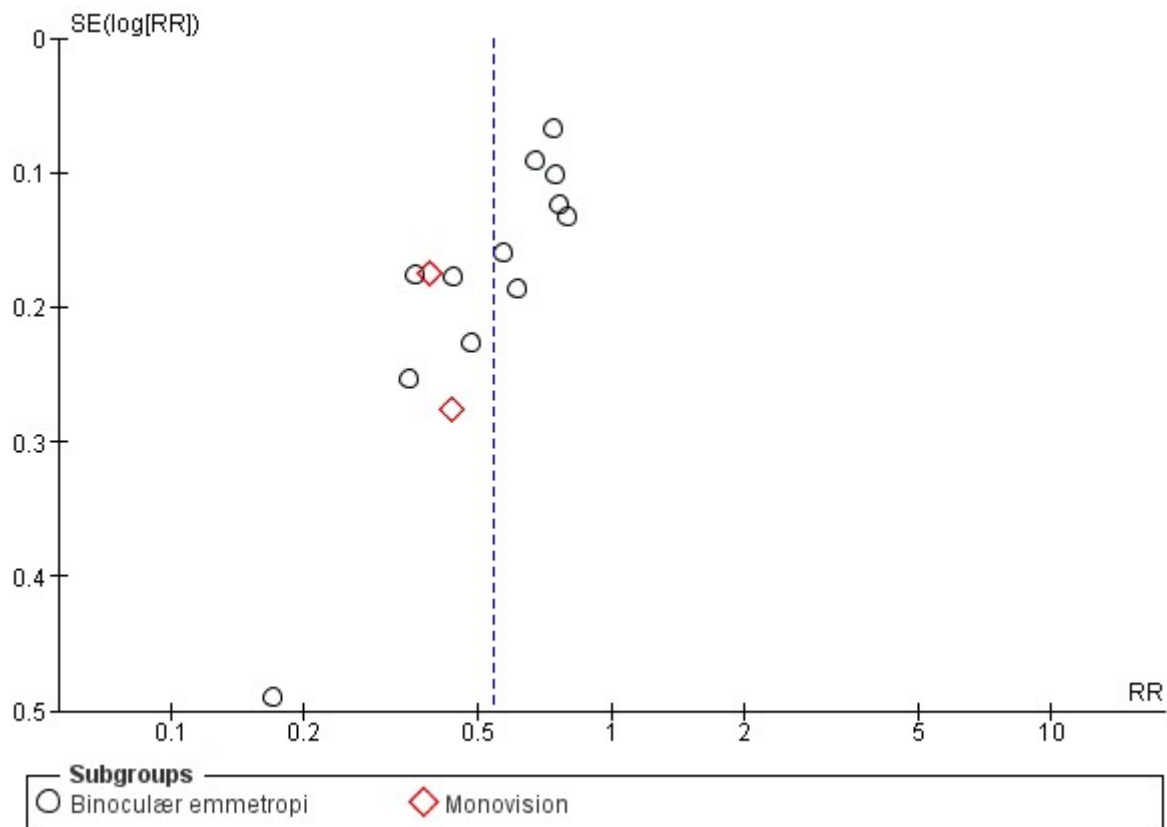
Forest plot of comparison: 1 Multifocal versus monofocal intraocular lenses, outcome: 1.1 Adverse events, number of people unless otherwise stated.

**Figure 10 (Analysis 1.1)**



Funnel plot of comparison: 1 Multifocal versus monofocal intraocular lenses, outcome: 1.1 Adverse events, number of people unless otherwise stated.

**Figure 11 (Analysis 1.10)**



Funnel plot of comparison: 1 Multifocal versus monofocal intraocular lenses, outcome: 1.10 Spectacle dependence (any).