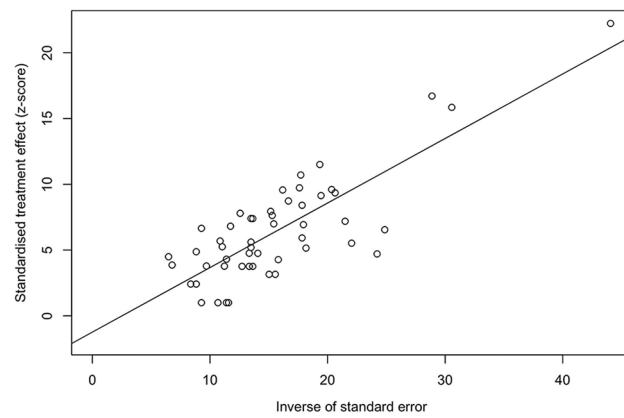
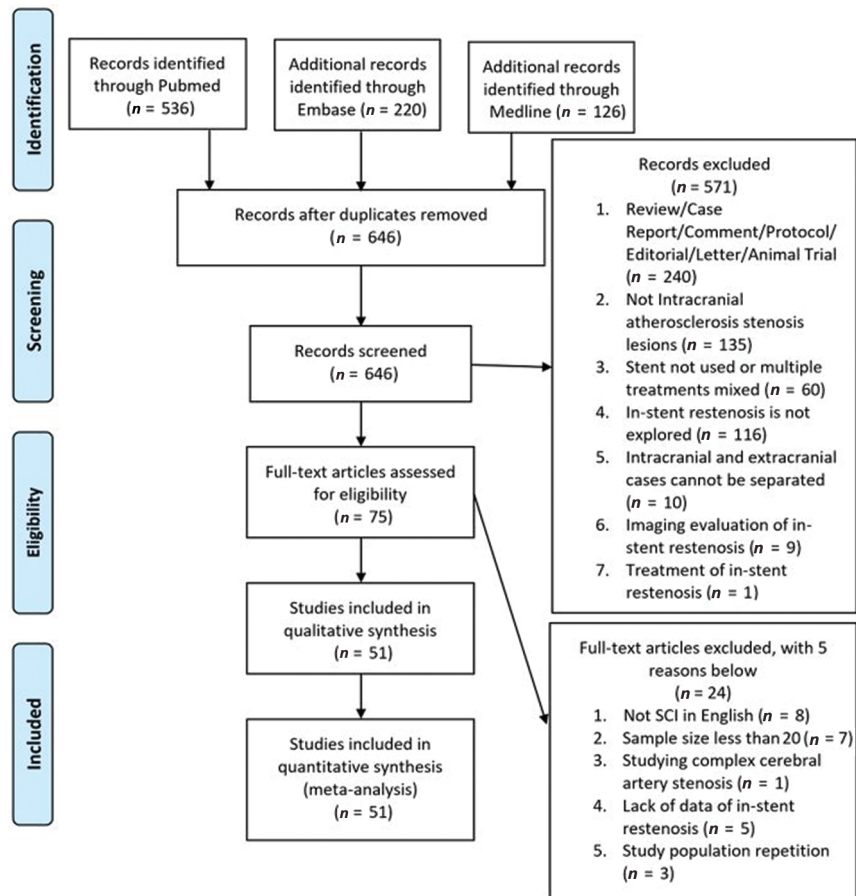


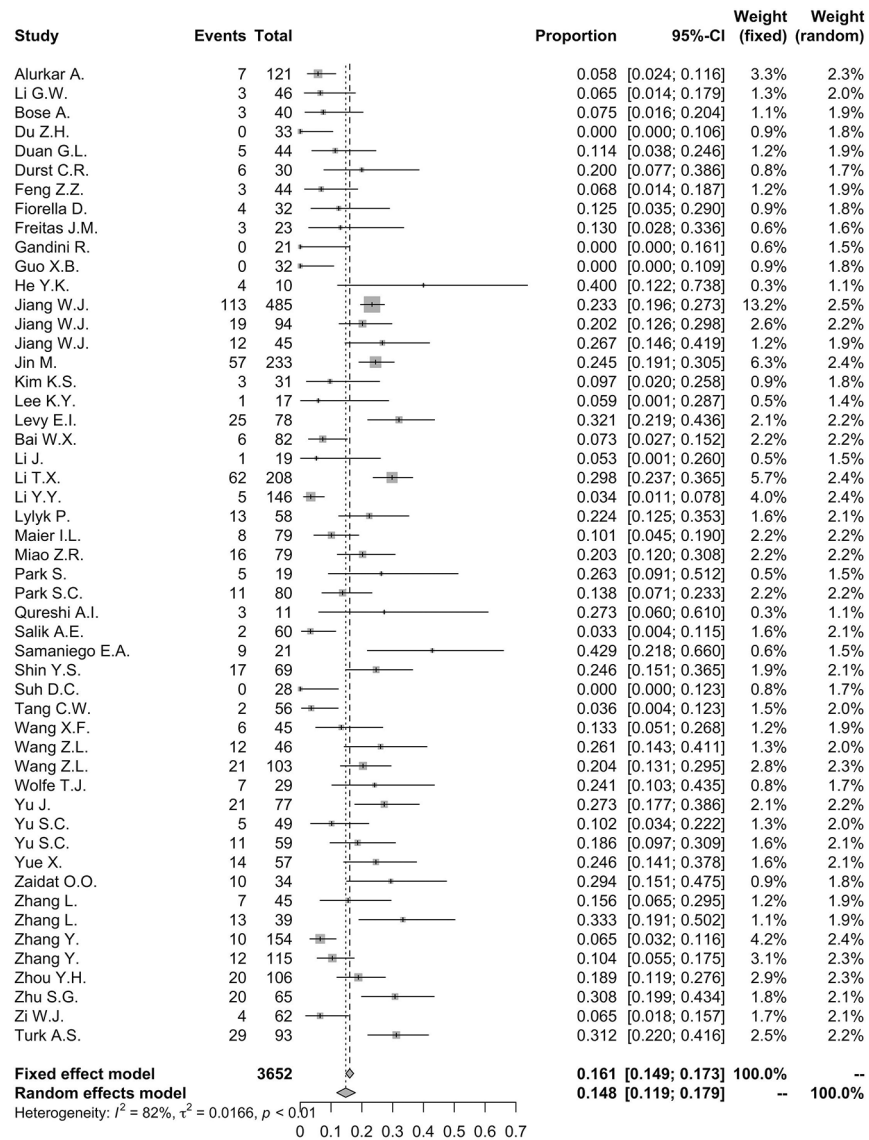
**ON-LINE FIG 1.** Funnel plot illustrating the publication bias of the meta-analysis.



**ON-LINE FIG 2.** Egger test excluding the publication bias of the meta-analysis.

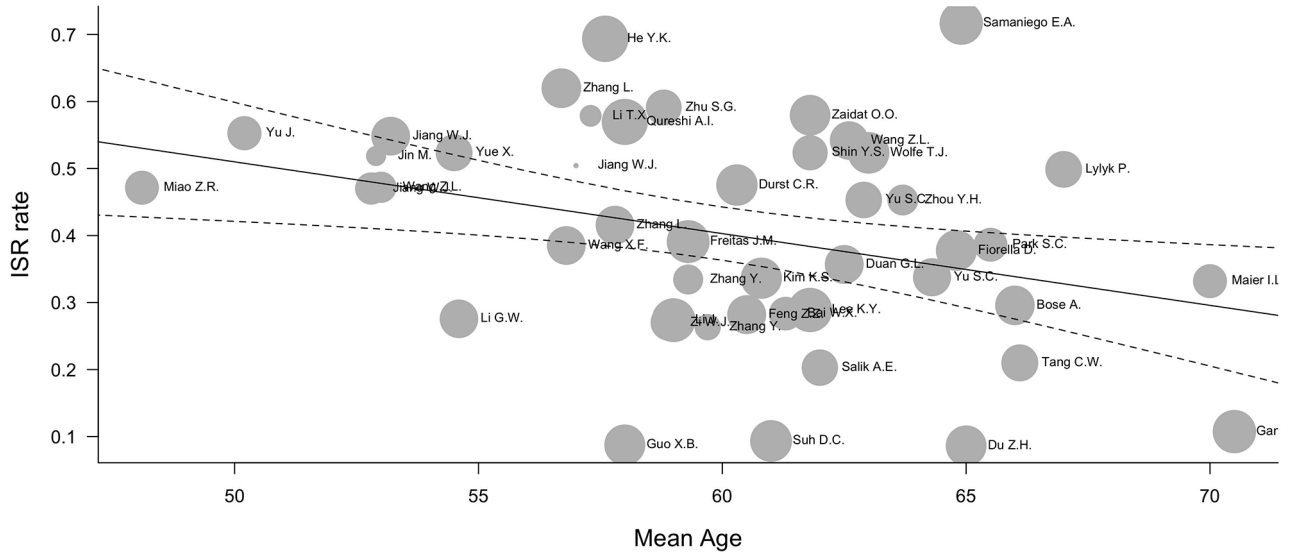


**ON-LINE FIG 3.** PRISMA flow diagram presents the screening process.

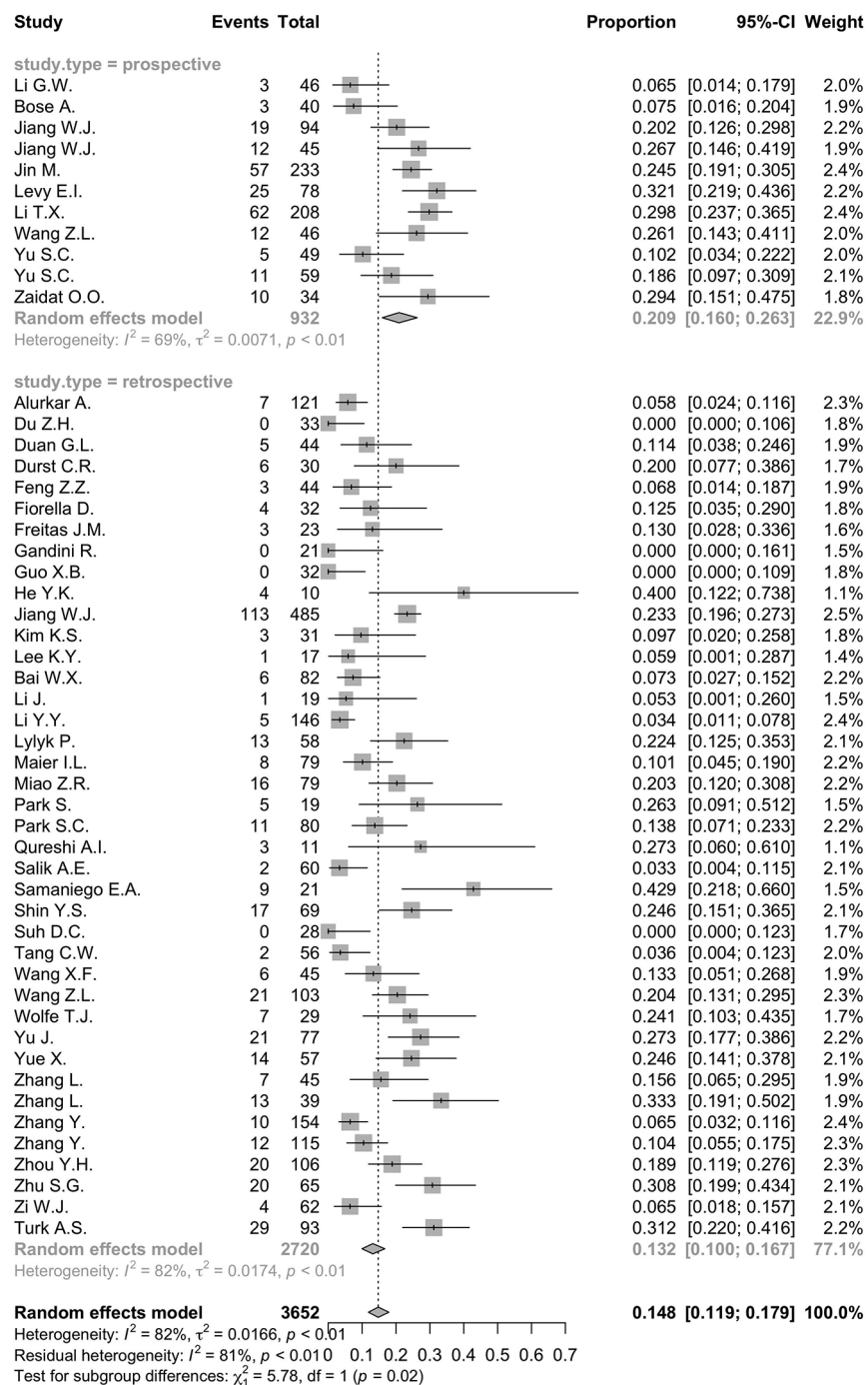


ON-LINE FIG 4. Forest plot demonstrates the rate of ISR in patients with intracranial atherosclerosis after stent implantation.

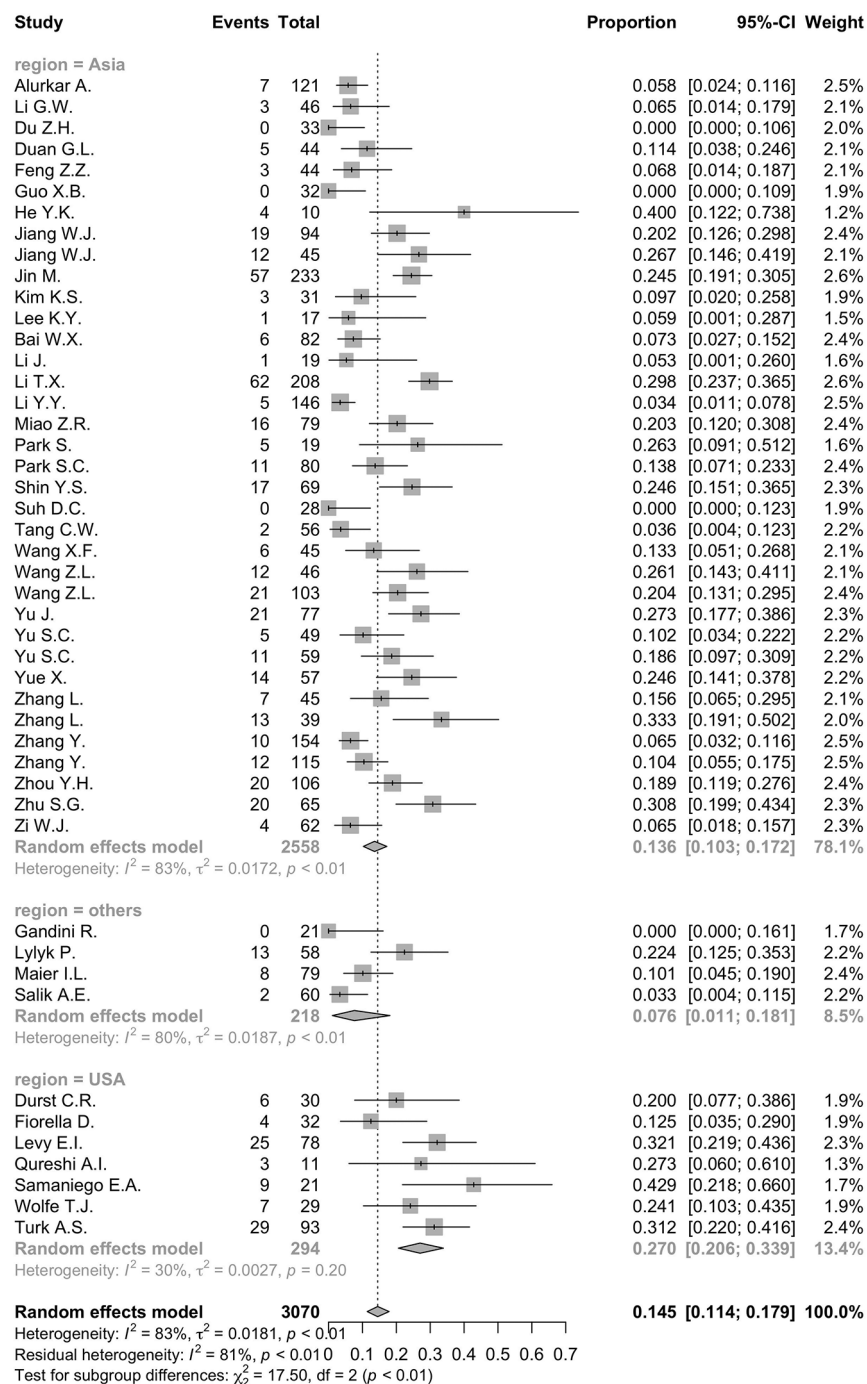
ISR vs Mean Age Regression Plot



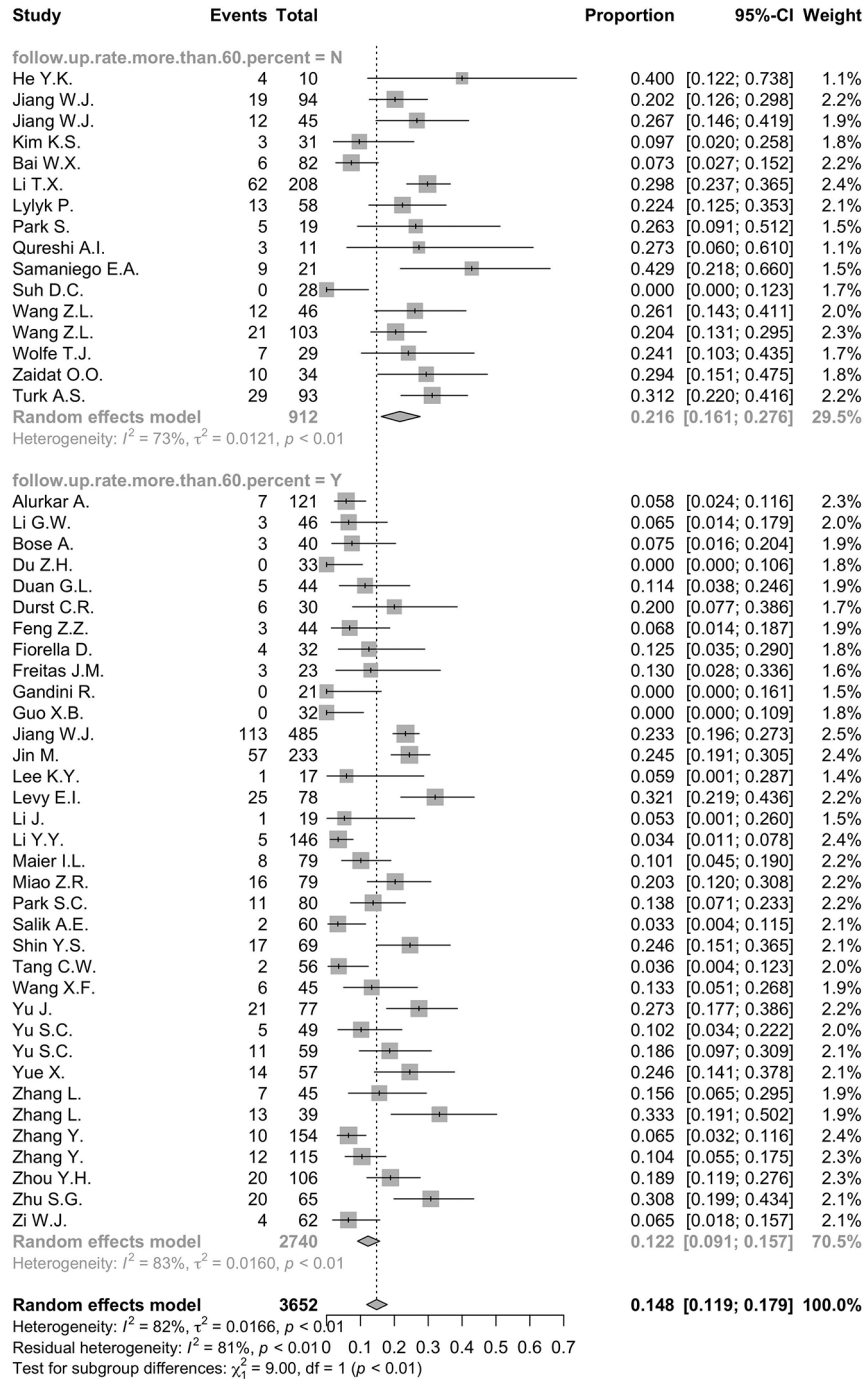
ON-LINE FIG 5. Bubble plot demonstrates the association between the mean age in the studies and the ISR rate.



ON-LINE FIG 6. Forest plot demonstrates the ISR rate, with subgroup analysis regarding study type.

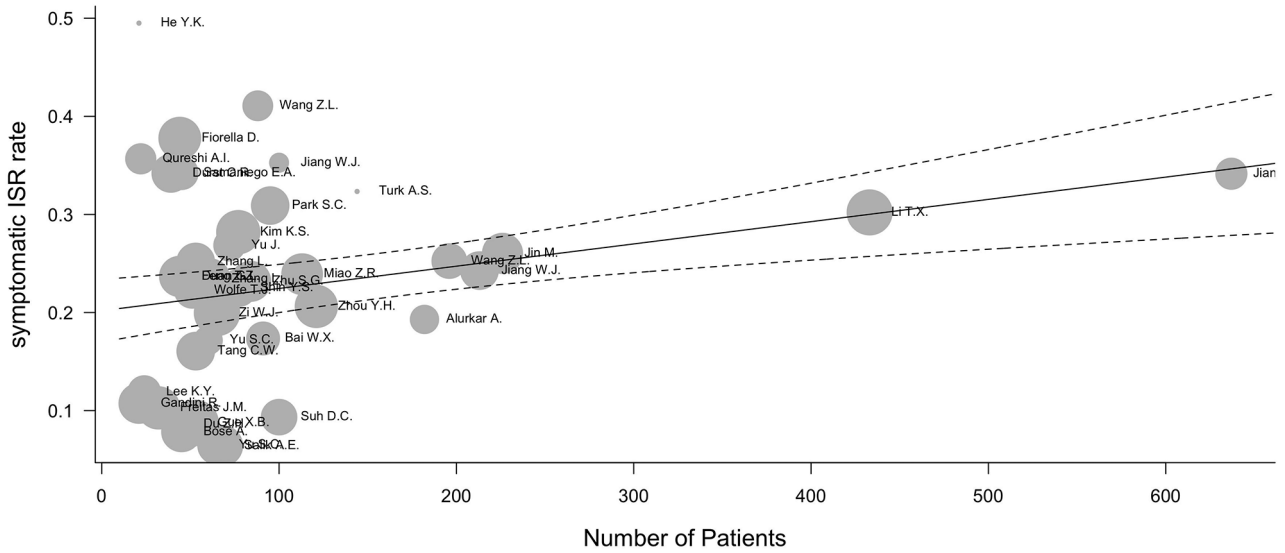


**ON-LINE FIG 7.** Forest plot demonstrates the ISR rate, with subgroup analysis regarding region.



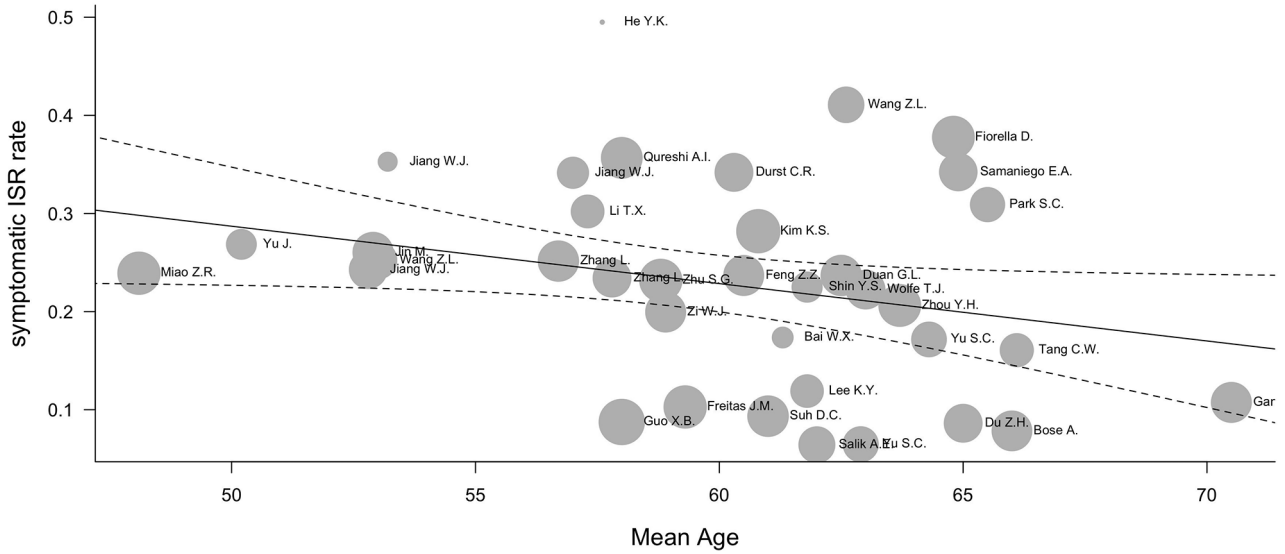
**ON-LINE FIG 8.** Forest plot demonstrates the ISR rate, with subgroup analysis regarding the imaging follow-up rate.

**Symptomatic ISR vs Number of Patients Regression Plot**



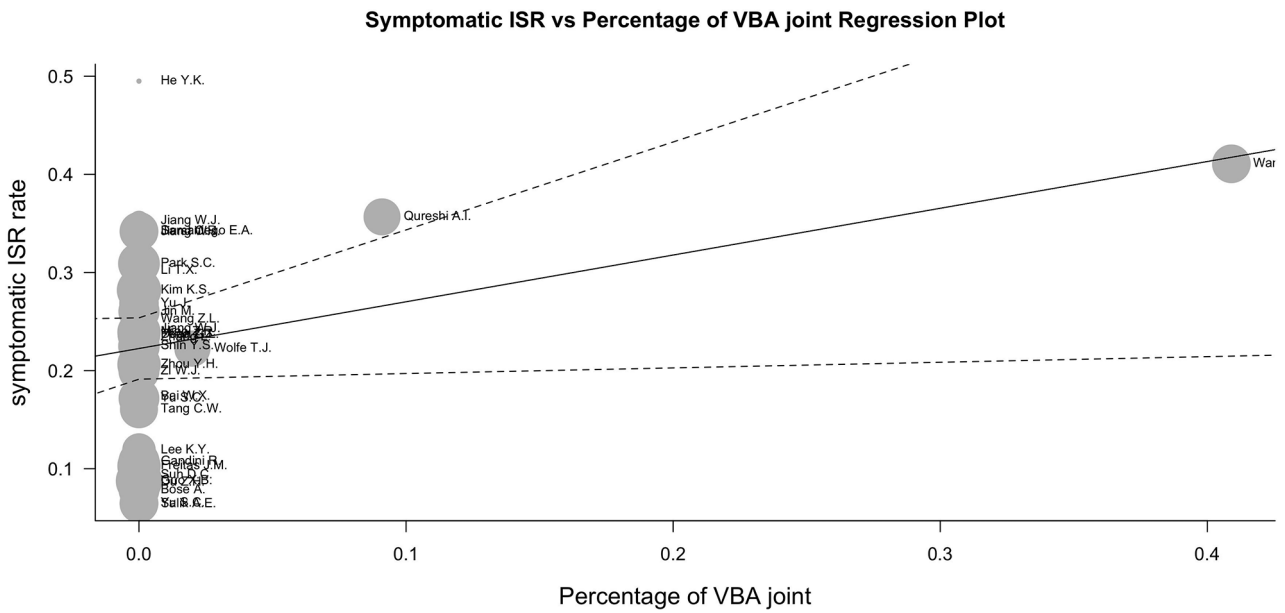
**ON-LINE FIG 9.** Bubble plot demonstrates the association between the sample size of studies and the rate of symptomatic ISR.

**Symptomatic ISR vs Mean Age Regression Plot**

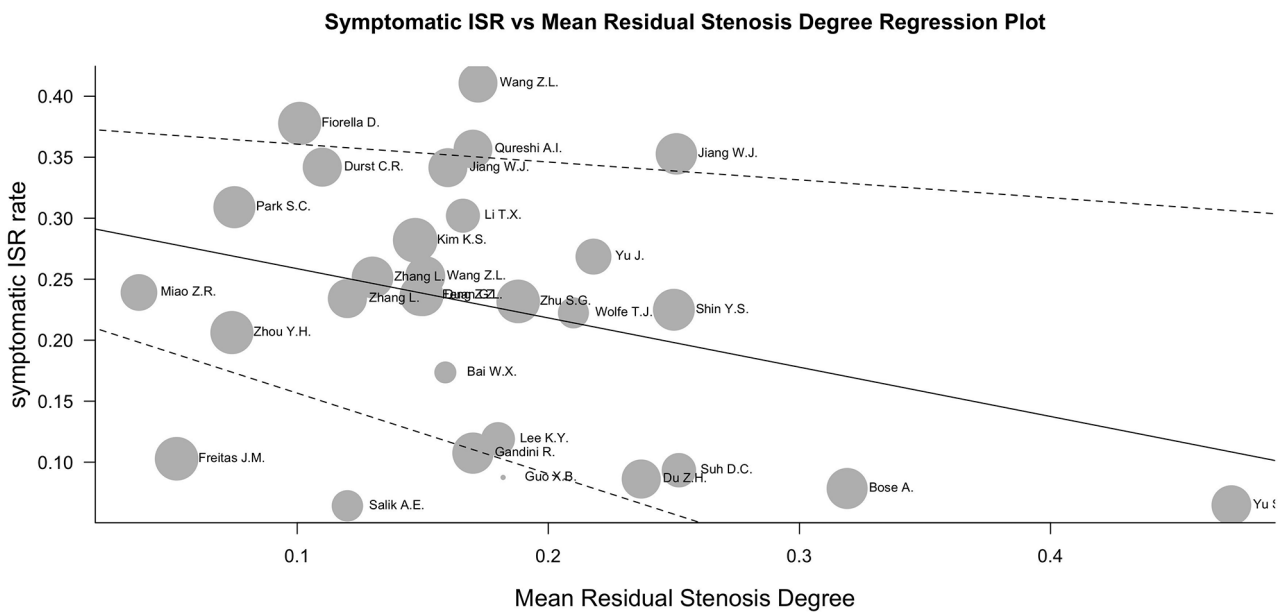


**ON-LINE FIG 10.** Bubble plot demonstrates the association between the mean age in studies and the rate of symptomatic ISR.





**ON-LINE FIG 11.** Bubble plot demonstrates the association between the proportion of vertebrobasilar junctions in studies and the rate of symptomatic ISR.



**ON-LINE FIG 12.** Bubble plot demonstrates the association between mean residual stenosis degree in studies and the rate of symptomatic ISR.

**On-line Table 1: Quality measure of included cohort studies by the Newcastle-Ottawa scale<sup>a</sup>**

Study Author	Selection <sup>b</sup>				Comparability <sup>c</sup>		Outcome <sup>d</sup>			Quality Scores
	1	2	3	4	a	b	1	2	3	
Li et al <sup>30</sup>	★	★	★		★	★	★	★		7
Jiang et al <sup>25</sup>	★	★	★		★	★	★	★		7
Jiang et al <sup>26</sup>	★	★	★	★	★	★	★	★		8
Jin et al <sup>7</sup>	★	★	★	★	★	★	★	★		8
Li et al <sup>32</sup>	★	★	★		★	★	★	★		7
Maier et al <sup>34</sup>	★	★	★			★	★	★		6
Park et al <sup>36</sup>	★	★	★		★	★	★	★		7
Qureshi et al <sup>38</sup>	★	★	★		★	★	★	★		7
Tang et al <sup>43</sup>	★	★	★		★	★	★	★		7
Yu et al <sup>48</sup>	★	★	★	★	★	★	★			7
Yu et al <sup>49</sup>	★	★	★	★	★	★	★	★		8
Yue et al <sup>51</sup>	★	★	★		★	★	★	★		7
Zaidat et al <sup>4</sup>	★	★	★	★	★	★	★	★		8
Zhang et al <sup>53</sup>	★	★	★		★	★	★	★	★	8
Zhang et al <sup>54</sup>	★	★	★		★	★	★	★	★	8
Turk et al <sup>58</sup>	★	★	★			★	★	★		6

<sup>a</sup> Newcastle-Ottawa Scale for quality assessment for cohort studies (scores 0-8; studies with >5 ★ were considered high-quality).

<sup>b</sup> Selection

- 1) Representativeness of the exposed cohort
  - a) Truly representative of the average (described) in the community ★
  - b) Somewhat representative of the average (described) in the community ★
  - c) Selected group of users, eg, nurses, volunteers
  - d) No description of the derivation of the cohort
- 2) Selection of the nonexposed cohort
  - a) Drawn from the same community as the exposed cohort ★
  - b) Drawn from a different source
  - c) No description of the derivation of the nonexposed cohort
- 3) Ascertainment of exposure
  - a) Secure record (eg, surgical records) ★
  - b) Structured interview ★
  - c) Written self-report
  - d) No description
- 4) Demonstration that the outcome of interest was not present at the start of study
  - a) Yes ★
  - b) No

<sup>c</sup> Comparability

- 1) Comparability of cohorts on the basis of the design or analysis
  - a) Study controls for (select the most important factor) ★
  - b) Study controls for any additional factor ★

<sup>d</sup> Outcome

- 1) Assessment of outcome
  - a) Independent blind assessment ★
  - b) Record linkage ★
  - c) Self-report
  - d) No description
- 2) Was follow-up long enough for outcomes to occur?
  - a) Yes (select an adequate follow up period for outcome of interest) ★
  - b) No
- 3) Adequacy of follow-up of cohorts
  - a) Complete follow-up; all subjects accounted for ★
  - b) Subjects lost to follow-up unlikely to introduce bias, small number lost > (select an adequate %) follow-up, or description provided of those lost ★
  - c) Follow up rate < (select an adequate percentage) and no description of those lost
  - d) No statement

**On-line Table 2: Quality measure of included single-arm studies by the MINORS criteria<sup>a</sup>**

Study Author	MINORS Criteria								Quality Scores
	1	2	3	4	5	6	7	8	
Alurkar et al <sup>9</sup>	2	2	2	2	2	2	0	0	12
Bose et al <sup>16</sup>	2	2	2	2	2	2	0	0	12
Du Z et al <sup>17</sup>	2	2	2	2	2	2	0	0	12
Duan et al <sup>59</sup>	2	2	2	2	2	0	2	0	14
Durst et al <sup>18</sup>	2	1	2	2	2	2	0	0	11
Feng et al <sup>19</sup>	2	2	2	2	2	2	2	0	14
Fiorella et al <sup>20</sup>	2	2	2	2	2	2	0	0	12
Freitas et al <sup>21</sup>	2	2	2	2	2	2	0	0	12
Gandini et al <sup>22</sup>	2	1	2	2	2	2	1	0	12
Guo et al <sup>23</sup>	2	2	2	2	2	2	0	0	12
He et al <sup>24</sup>	2	2	2	2	2	2	0	0	12
Jiang et al <sup>27</sup>	2	2	2	2	2	2	0	0	12
Kim et al <sup>28</sup>	2	1	2	2	2	2	0	0	11
Lee et al <sup>29</sup>	2	2	2	2	2	2	0	0	12
Levy et al <sup>8</sup>	2	2	2	2	2	2	2	0	14
Bai et al <sup>15</sup>	2	2	2	2	2	2	0	0	12
Li et al <sup>10</sup>	2	2	2	2	2	2	0	0	12
Li et al <sup>31</sup>	2	2	2	2	2	2	0	0	12
Lylyk et al <sup>33</sup>	2	2	2	2	2	2	0	0	12
Miao et al <sup>35</sup>	2	2	2	2	2	2	0	0	12
Park et al <sup>37</sup>	2	2	2	2	2	2	0	0	12
Salik et al <sup>39</sup>	2	2	2	2	2	2	0	0	12
Samaniego et al <sup>40</sup>	2	2	2	2	2	2	0	0	12
Shin et al <sup>41</sup>	2	2	2	2	2	2	0	0	12
Suh et al <sup>42</sup>	2	2	2	2	2	2	0	0	12
Wang et al <sup>44</sup>	2	2	2	2	2	2	0	0	12
Wang et al <sup>45</sup>	2	2	2	2	2	2	0	0	12
Wang et al <sup>46</sup>	2	2	2	2	2	2	0	0	12
Wolfe et al <sup>47</sup>	2	2	2	2	2	2	0	0	12
Yu et al <sup>50</sup>	2	2	2	2	2	2	0	0	12
Zhang et al <sup>11</sup>	2	2	2	2	2	2	0	0	12
Zhang et al <sup>52</sup>	2	2	2	2	2	2	0	0	12
Zhou et al <sup>55</sup>	2	2	2	2	2	2	0	0	12
Zhu et al <sup>56</sup>	2	2	2	2	2	2	0	0	12
Zi et al <sup>57</sup>	2	2	2	2	2	2	0	0	12

<sup>a</sup> The MINORS criteria include the following items:

- 1) A clearly stated aim
- 2) Inclusion of consecutive patients
- 3) Prospective data collection
- 4) End points appropriate for the aim of the study
- 5) Unbiased assessment of the study end point
- 6) A follow-up period appropriate for the aims of the study
- 7) <5% lost to follow-up
- 8) Prospective calculation of the sample size; additional criteria in the case of a comparative study
- 9) An adequate control group
- 10) Contemporary groups
- 11) Baseline equivalence of groups
- 12) Adequate statistical analyses.

The items are scored as follows: 0 (not reported); 1 (reported but inadequate); or 2 (reported and adequate). The ideal global score was 16 for noncomparative studies and 24 for comparative studies. All included single-arm studies were non-comparative studies.