Azienda USL di Modena
in collaborazione con
Regione Emilia-Romagna
Assessorato politiche per la salute

SERVIZIO SANITARIO REGIONALE
EMILIA-ROMAGNA

l'Adenoma Detection Rate per singolo endoscopista

importante indicatore di qualità delle colonscopie fatte nell'ambito degli screening del tumore del colonretto: i primi risultati del programma modenese

La sorveglianza epidemiologica
dello screening dei tumori del colon-retto
nella Regione Emilia-Romagna

Seminario di studio

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Sala 20 maggio 2012
Viale della Fiera 8 – Bologna

L’Adenoma Detection Rate (ADR) è un importante indicatore di qualità della colonscopia

… dimostrata una relazione inversa con l’incidenza di cancri intervallo...

Quality Indicators for Colonoscopy and the Risk of Interval Cancer

The hazard ratios for adenoma detection rates of less than 11.0%, 11.0 to 14.9%, and 15.0 to 19.9%, as compared with a rate of 20.0% or higher, were 10.94 (95% confidence interval [CI], 1.37 to 87.01), 10.75 (95% CI, 1.36 to 85.06), and 12.50 (95% CI, 1.51 to 103.43), respectively (P = 0.02 for all comparisons).

HR di circa 10

per endoscopisti con ADR <20% rispetto a quelli con ADR>=20%

Kaminski MF, Regula J, Kraszewska E, et al. Quality Indicators for Colonoscopy and the Risk of Interval Cancer. New England Journal of Medicine **2010**;362:1795–803. doi:10.1056/NEJMoa0907667

Adenoma Detection Rate and Risk of Colorectal Cancer and Death

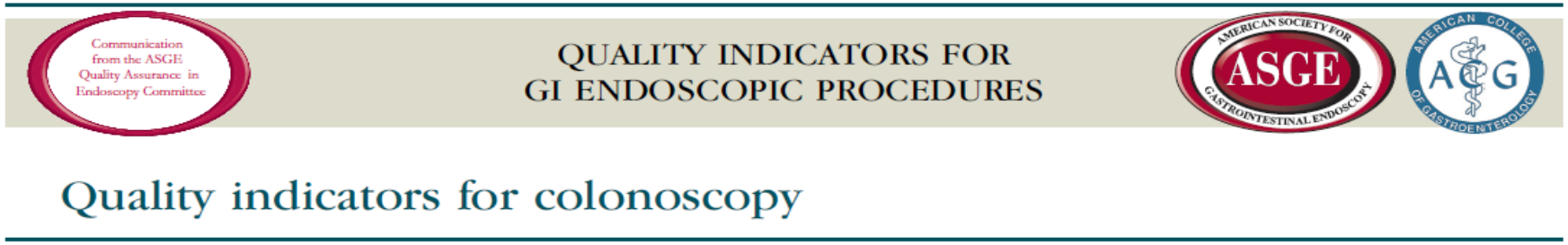
…..Each 1.0% increase in the adenoma detection rate was associated with a 3.0% decrease in the risk of cancer (hazard ratio, 0.97; 95% CI, 0.96 to 0.98).

Conclusions

The adenoma detection rate was inversely associated with the risks of interval colorectal cancer, advanced-stage interval cancer, and fatal interval cancer.

Corley DA, Jensen CD, Marks AR, et al. Adenoma Detection Rate and Risk of Colorectal Cancer and Death. http://dx.doi.org/10.1056/NEJMoa1309086. **2014**. doi:10.1056/NEJMoa1309086

… Tuttavia non c’è ancora consenso, soprattutto in ambito di screening di popolazione con FIT, sulle modalità di misurazione (esclusioni da applicare), e su quali dovrebbero essere gli standard.



…Recent studies report ADRs that are much higher than the original targets and have, in some cases, exceeded 50%.

..a new minimum target for overallADR (ADR in a male/female population aged >=50 years

undergoing screening colonoscopy) of at least 25%. Because some endoscopists perform colonoscopy for primarily male or female patients (eg, endoscopists in Veterans Affairs hospitals or female endoscopists with largely female patient populations), an ADR target

of 30% is recommended for men and 20% for women.

Although these new targets represent current understanding of ADR performance needed to optimize CRC prevention, they should not be considered a standard of care.

Rather, they should be used as performance targets in the quality improvement process.

Rex DK, Schoenfeld PS, Cohen J, et al. Quality indicators for colonoscopy. Gastrointest Endosc **2015**;81:31–53. doi:10.1016/j.gie.2014.07.058

Adenoma detection rate: in search of quality improvement, not just measurement

…The most important quality measure is the rate of interval CRC within 5 years or before the next scheduled colonoscopy…not currently available in most settings…

…

If we agree that ADR is an important surrogate for interval CRC, how should it be measured?

…It appears that ADR is a robust but cumbersome surrogate for interval CRC

difficult to do or manage and taking a lot of time and effort

Lieberman D, **Mascarenhas** R. Adenoma detection rate: in search of quality improvement, not just measurement. Gastrointestinal Endoscopy **2015**;82:683–5. doi:10.1016/j.gie.2015.02.020

The impact of exclusion criteria on a physician's adenoma detection rate

- **Objective**: To examine the impact of varying the colonoscopy exclusion criteria on physician ADR.
- **Design**: We applied different exclusion criteria used in 30 previous studies to a dataset of endoscopy and pathology reports. Under each exclusion criterion, we calculated physician ADR.
- **Patients**: Data on 20,040 colonoscopy examinations performed by 11 gastroenterologists from July 2009 to May 2013 and associated pathology notes.
- **Main Outcome Measurements**: ADRs across all colonoscopy examinations, each physician's ADR, and ADR ranking.
- **Results**: There were 28 different exclusion criteria used when measuring the ADR. Each study used a different combination of these exclusion criteria. …
- **Conclusion:** There is wide variation in the exclusion criteria used when measuring the ADR. Although these exclusion criteria can affect overall ADRs, **the relative rankings of physicians by ADR were stable**. ***A consensus definition of which exclusion criteria are applied when measuring ADR is needed.***

Marcondes FO, Dean KM, Schoen RE, et al. The impact of exclusion criteria on a physician's adenoma detection rate. Gastrointest Endosc **2015**;82:668–75. doi:10.1016/j.gie.2014.12.056

The impact of exclusion criteria on a physician's adenoma detection rate

Because physicians care for different patient populations, *an ADR definition should attempt to address these differences to ensure an "apples to apples" comparison*.

Exclusion criteria have been used to create a more homogeneous patient population to facilitate comparison.

Although this goal is important, *we recommend using relatively few exclusion criteria* and instead using other methods to address differences in patient population

Marcondes FO, Dean KM, Schoen RE, et al. The impact of exclusion criteria on a physician's adenoma detection rate. Gastrointest Endosc **2015**;82:668–75. doi:10.1016/j.gie.2014.12.056

Defining Benchmarks for Adenoma Detection Rate and Adenomas Per Colonoscopy in Patients Undergoing Colonoscopy Due to a Positive Fecal Immunochemical Test

Conclusions:

We have proposed methods of defining benchmarks for ADR and APC in FIT+ patients that go beyond the current "minimally acceptable" threshold currently recommended in average risk patients. These new thresholds represent results obtained by all peers and by a group of expert adenoma detectors defined in an independent patient cohort (average risk). *Because the true adenoma burden in FIT+ patients could vary based on factors such as the threshold used to define a positive FIT, screening programs or endoscopy units may need to calculate their own benchmarks using local data.*

Hilsden RJ, Bridges R, Dube C, et al. Defining Benchmarks for Adenoma Detection Rate and Adenomas Per Colonoscopy in Patients Undergoing Colonoscopy Due to a Positive Fecal Immunochemical Test. Am J Gastroenterol **2016**;111:1743–9. doi:10.1038/ajg.2016.449

Quality of colonoscopy in an organised colorectal cancer screening programme with immunochemical faecal occult blood test: the EQuIPE study (Evaluating Quality Indicators of the Performance of Endoscopy)

… In order to reduce variation in the baseline prevalence of lesions and to avoid double-counting of adenomas, only first colonoscopies following a positive FIT were included in the analysis.

At a per-patient analysis, at least one polyp/adenoma/advanced adenoma was in 59.3%, 44.8% and 29% of the procedures.

ADR was higher in men, those examined in the first FIT screening round, those with adequate bowel preparation, and it showed a trend toward increasing with older age.

ADR was associated with endoscopist specialty, but not with endoscopist years of experience or the volume of activity. ADR was higher in centres with dedicated sessions and in those that routinely used sedation.

Zorzi M, Senore C, Da Re F, et al. Quality of colonoscopy in an organised colorectal cancer screening programme with immunochemical faecal occult blood test: the EQuIPE study (Evaluating Quality Indicators of the Performance of Endoscopy). Gut Published Online First: 16 September **2014**. doi:10.1136/gutjnl-2014-307954

Calcolo degli ADR per caratteristiche persone e per singolo endoscopista nel programma di Modena

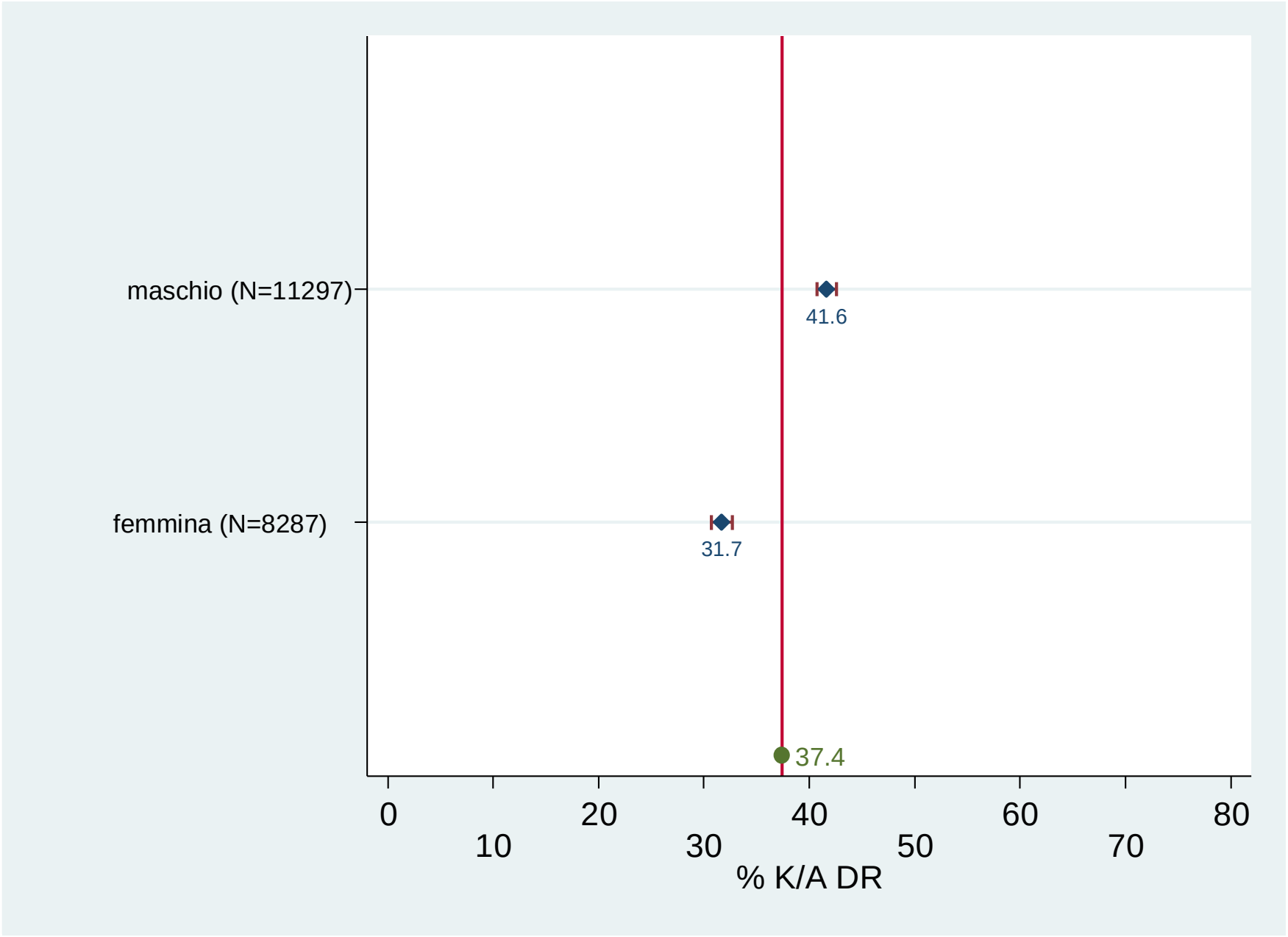
Materiali e metodi

Sono stati analizzati gli esiti delle colonscopie fatte dal 2012 a Settembre 2018 nell'ambito del programma di screening della provincia di Modena, su persone di età 50-75 anni al momento della colon. È stato calcolato l'ADR oltre che per il singolo endoscopista, anche per altre importanti variabili quali età e sesso degli screenati, anno di calendario, raggiungimento del cieco, pulizia/visione, tipo colon (da FIT+/ follow-up). Per ottenere dei valori di ADR dei singoli endoscopisti aggiustati per le alte variabili sono stati utilizzati dei modelli di poisson con metodo robusto nel calcolo dell'errore standard.

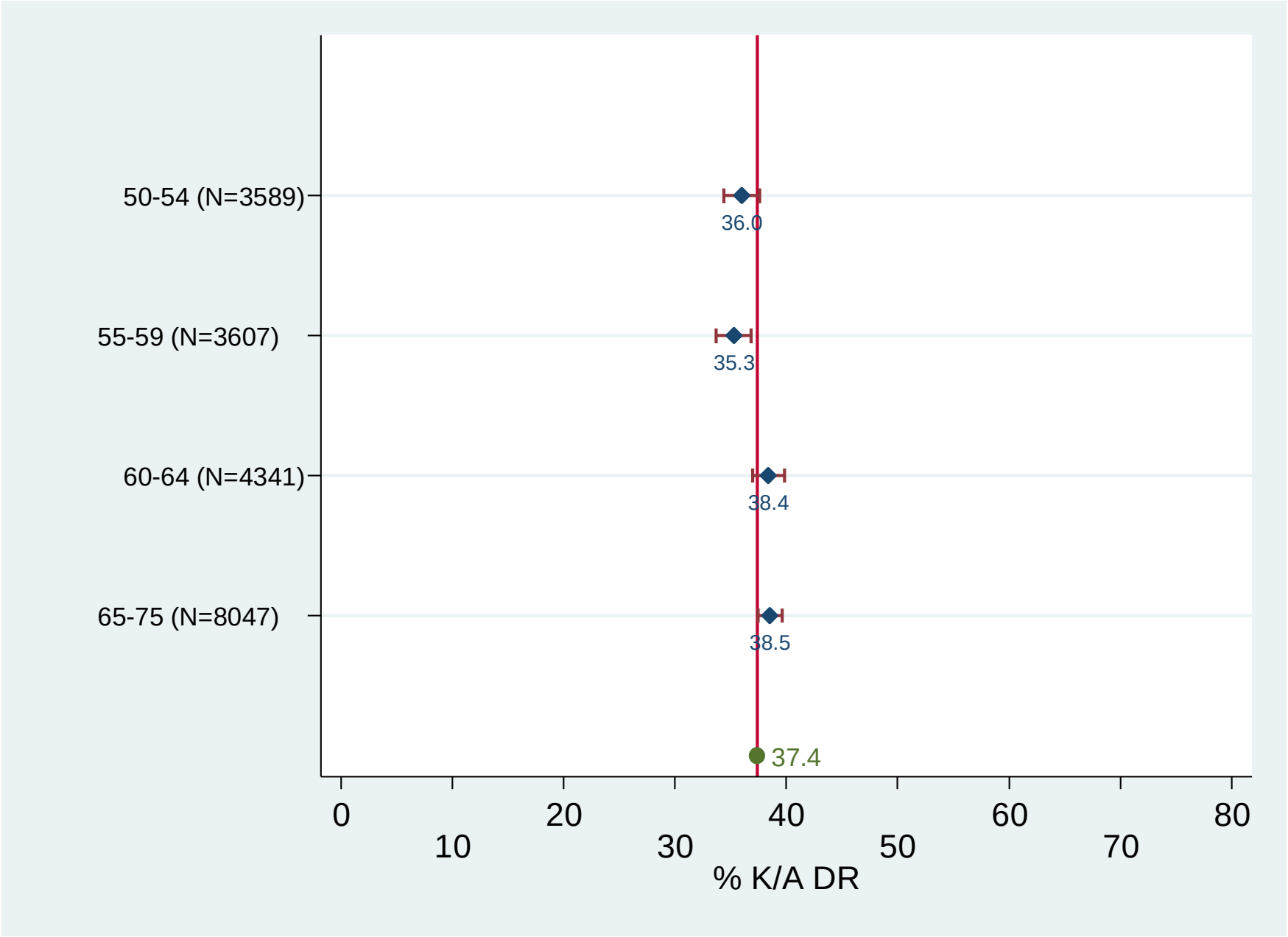
Adenoma Detection rate

% di colonscopie in cui è rilevato almeno un adenoma

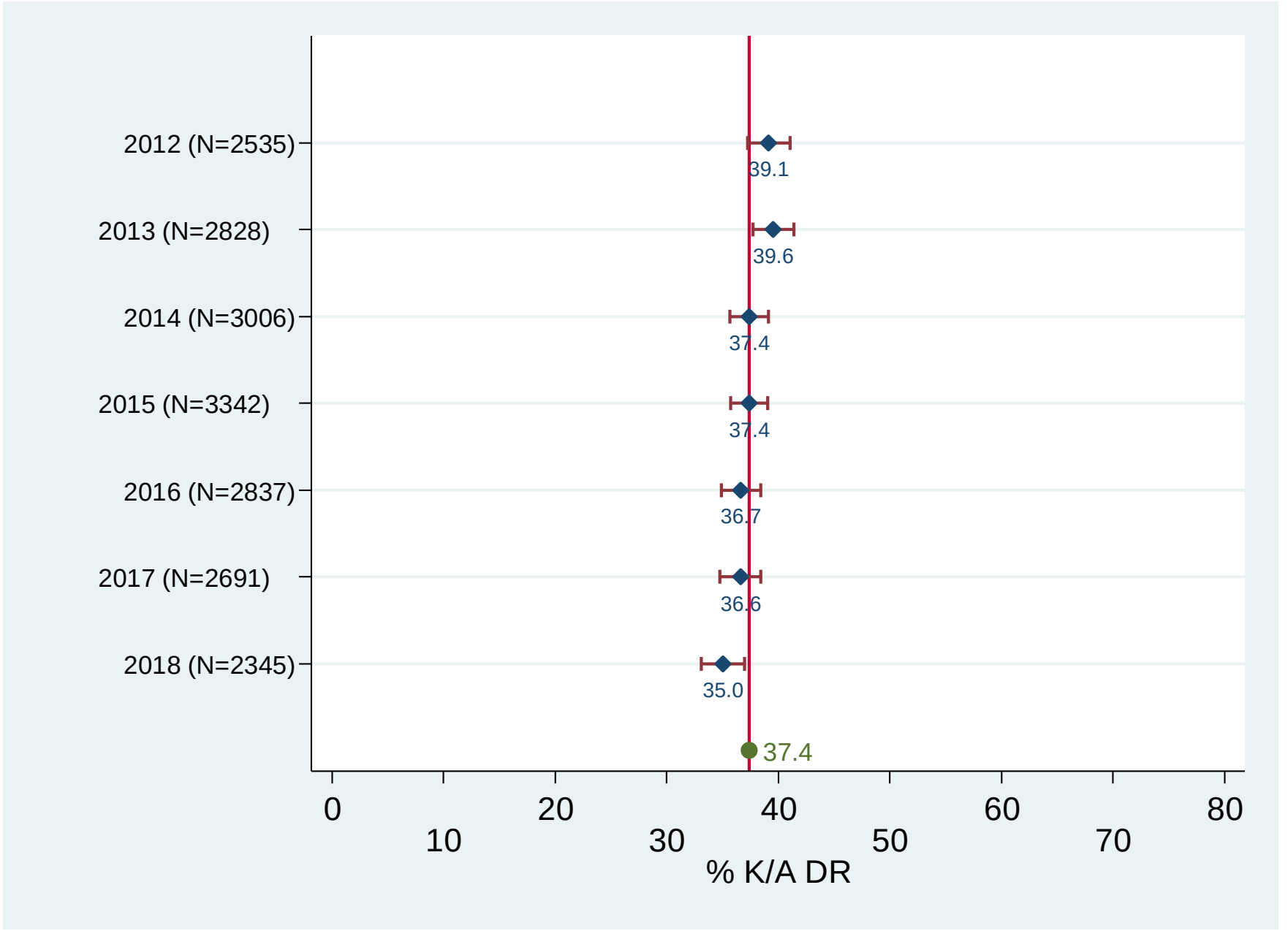
ADR per sesso



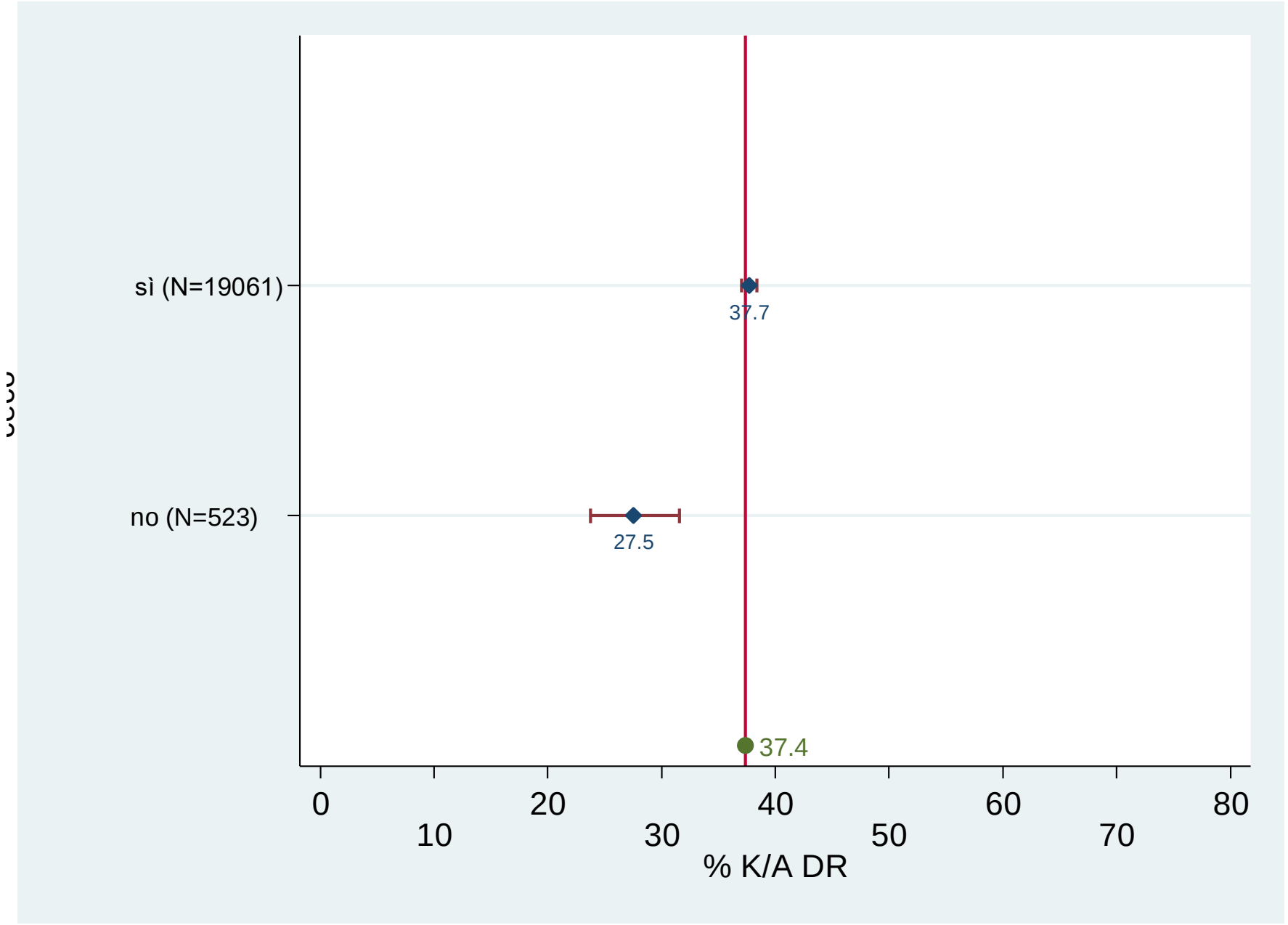
ADR per età


50-54 (N=3589)
36.0
55-59 (N=3607)
35.3
60-64 (N=4341)
38.4
65-75 (N=8047)
38.5
37.4
0
10
20
30
40
50
60
70
80
% K/A DR

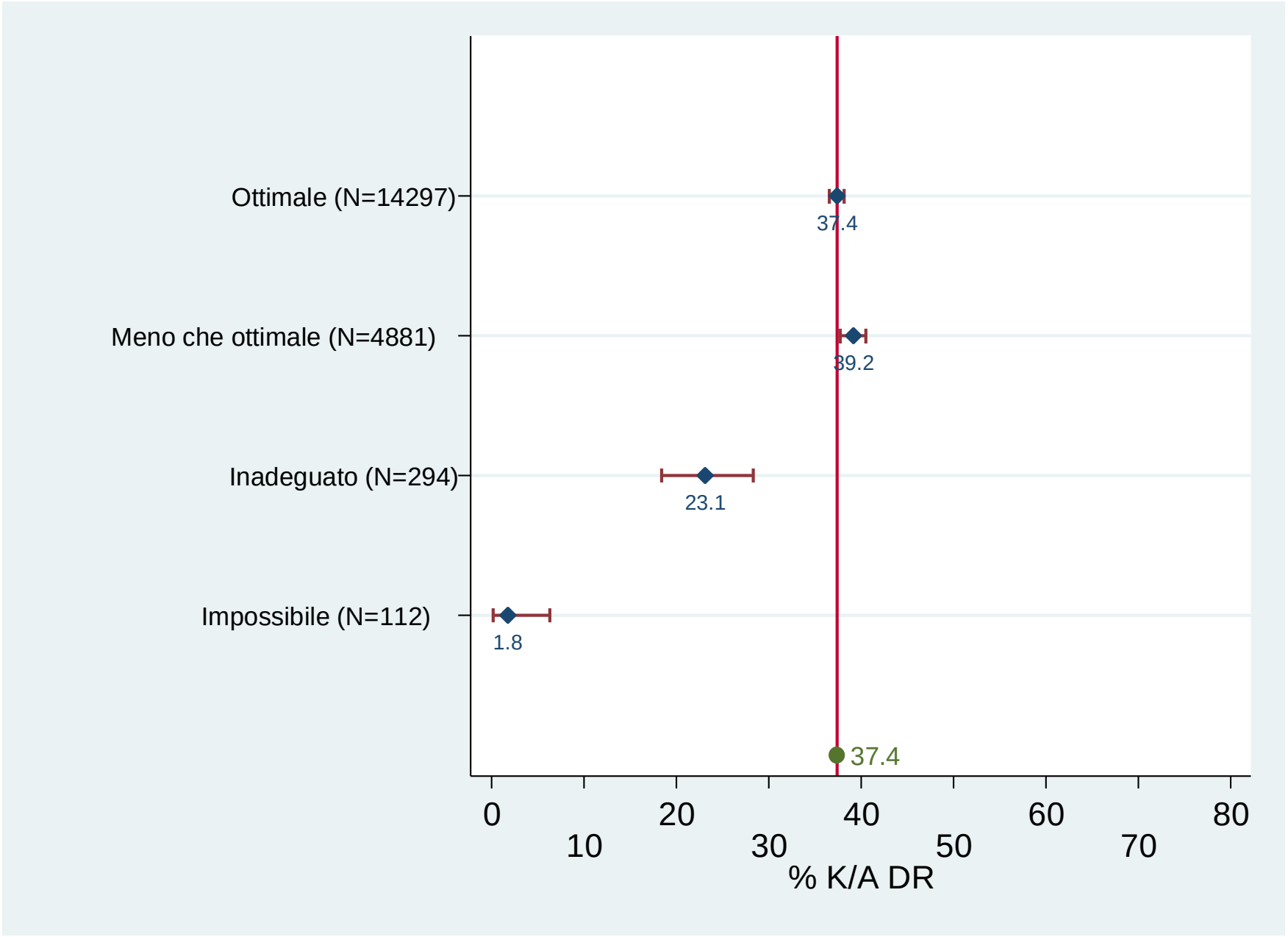
ADR per anno esecuzione colon



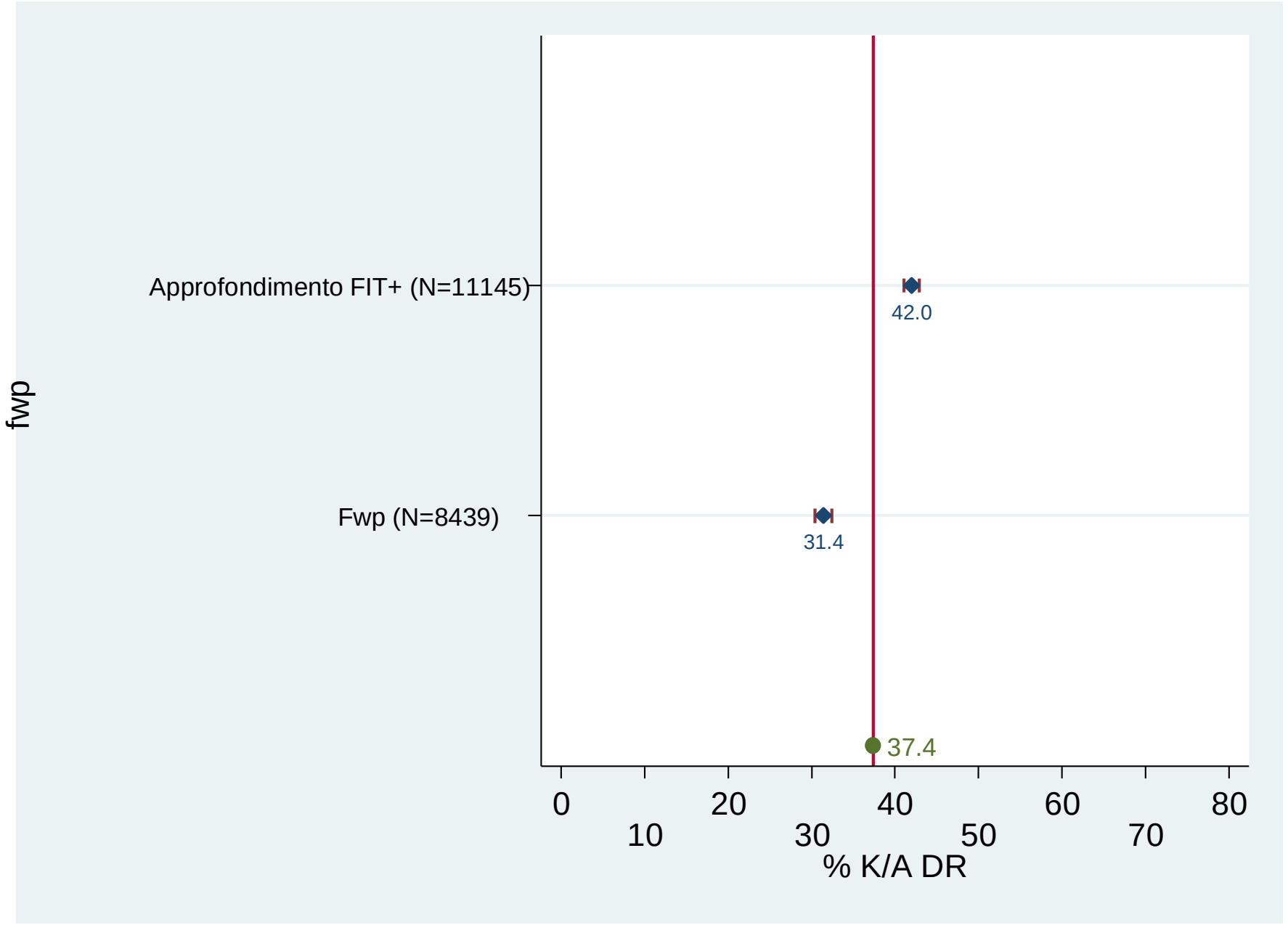
ADR per raggiungimento cieco



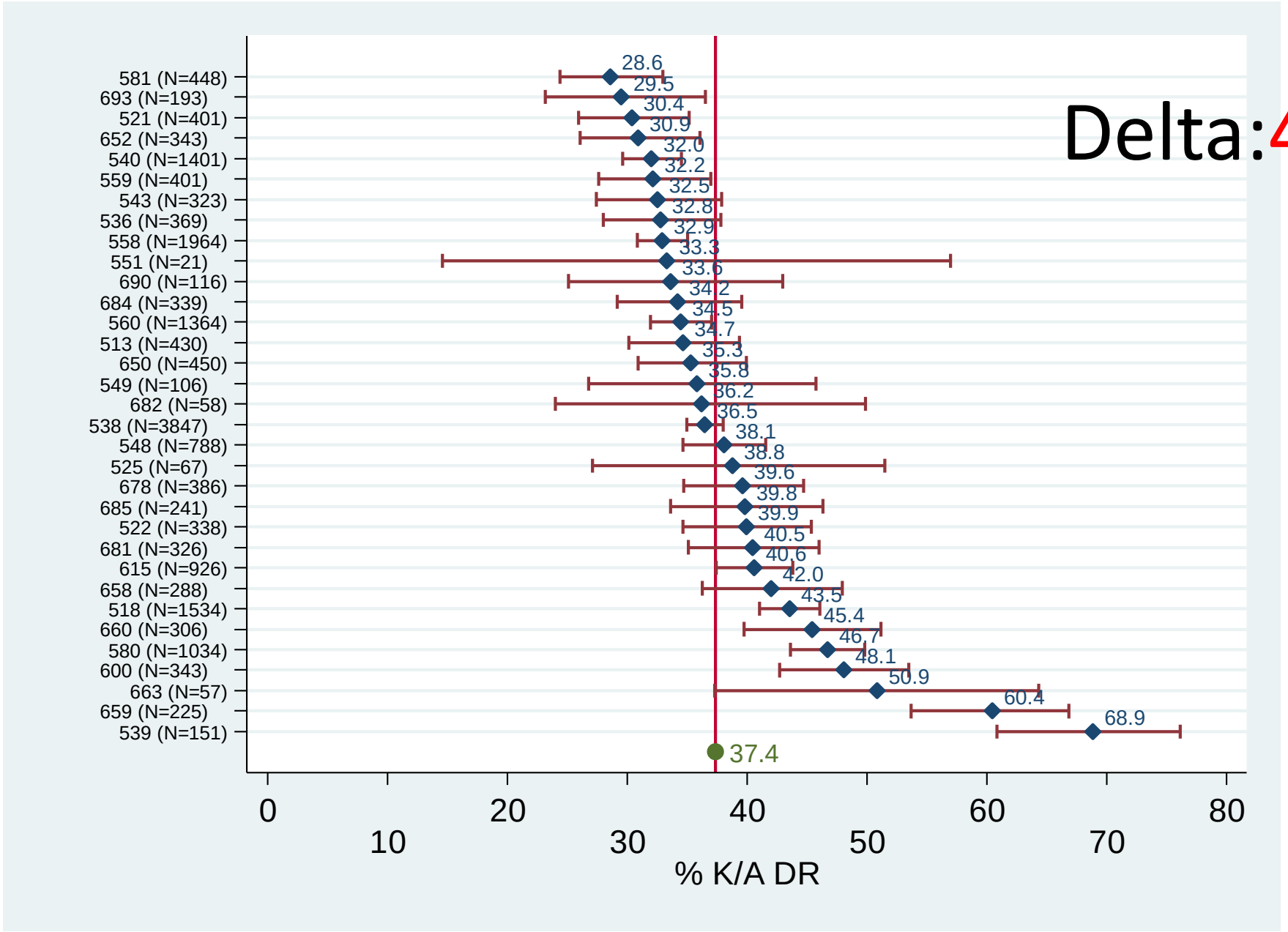
ADR per visione/pulizia



ADR per colon per FIT+ o fwp

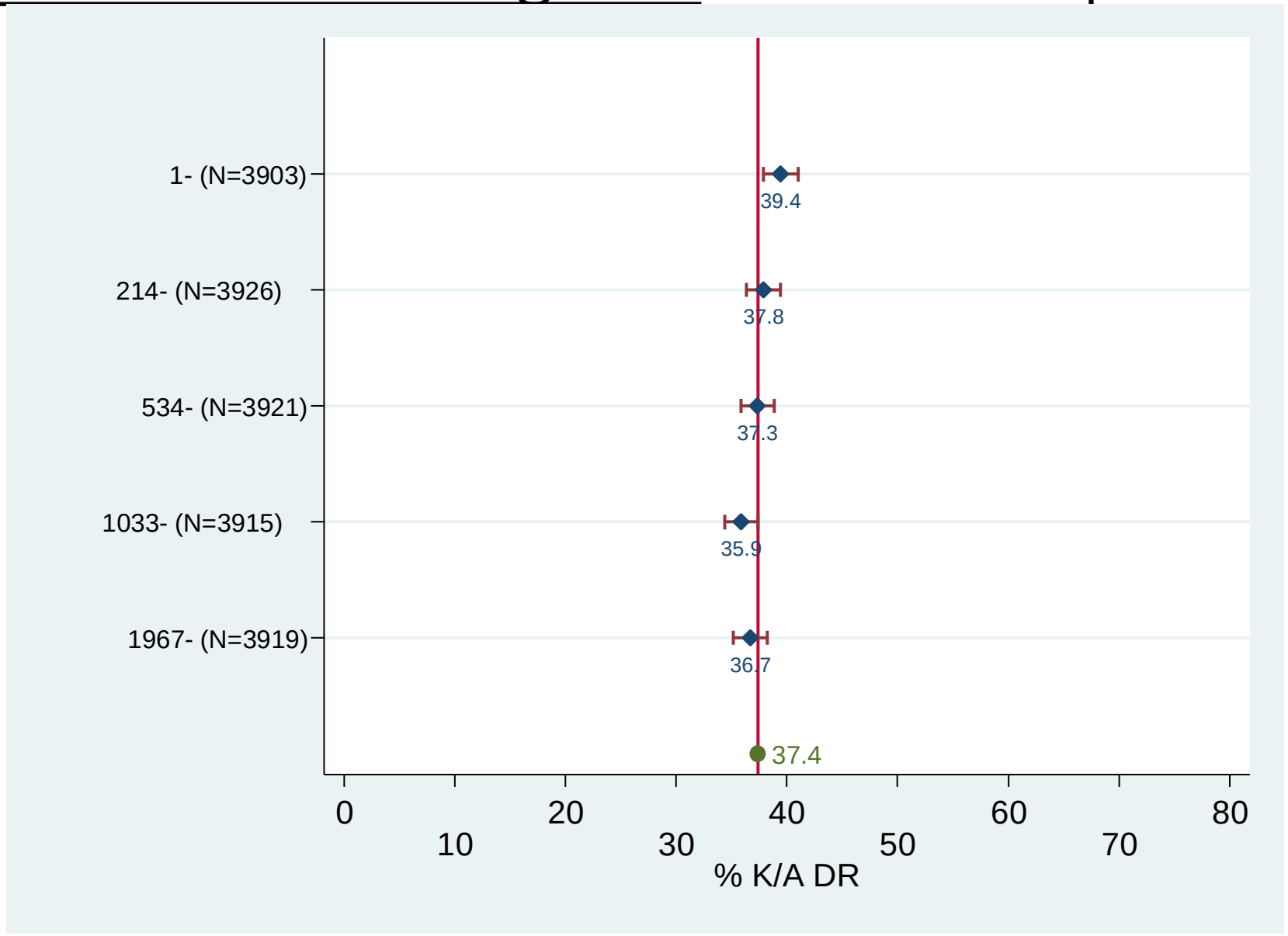


ADR per endoscopista

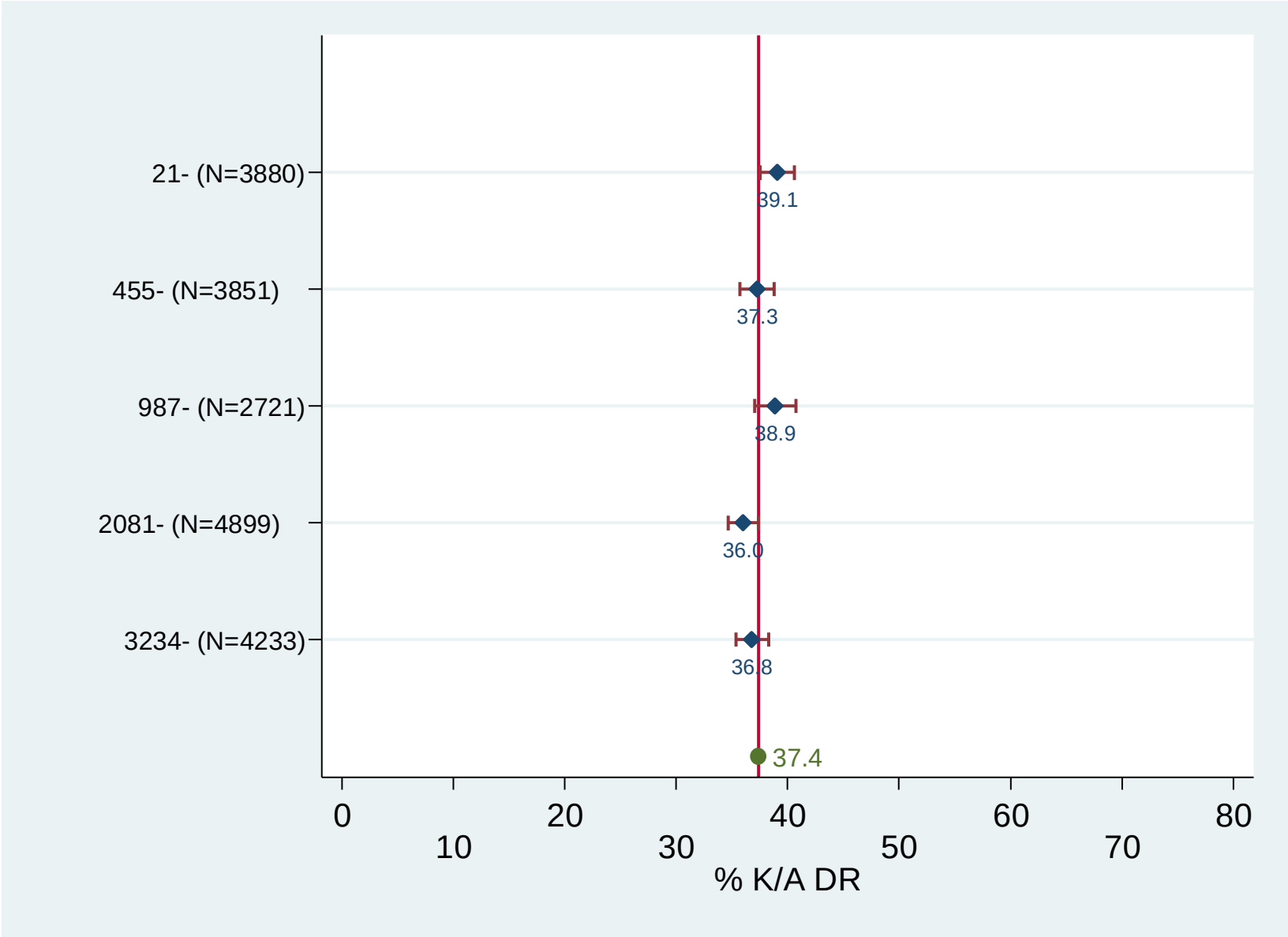


Delta:40,3%

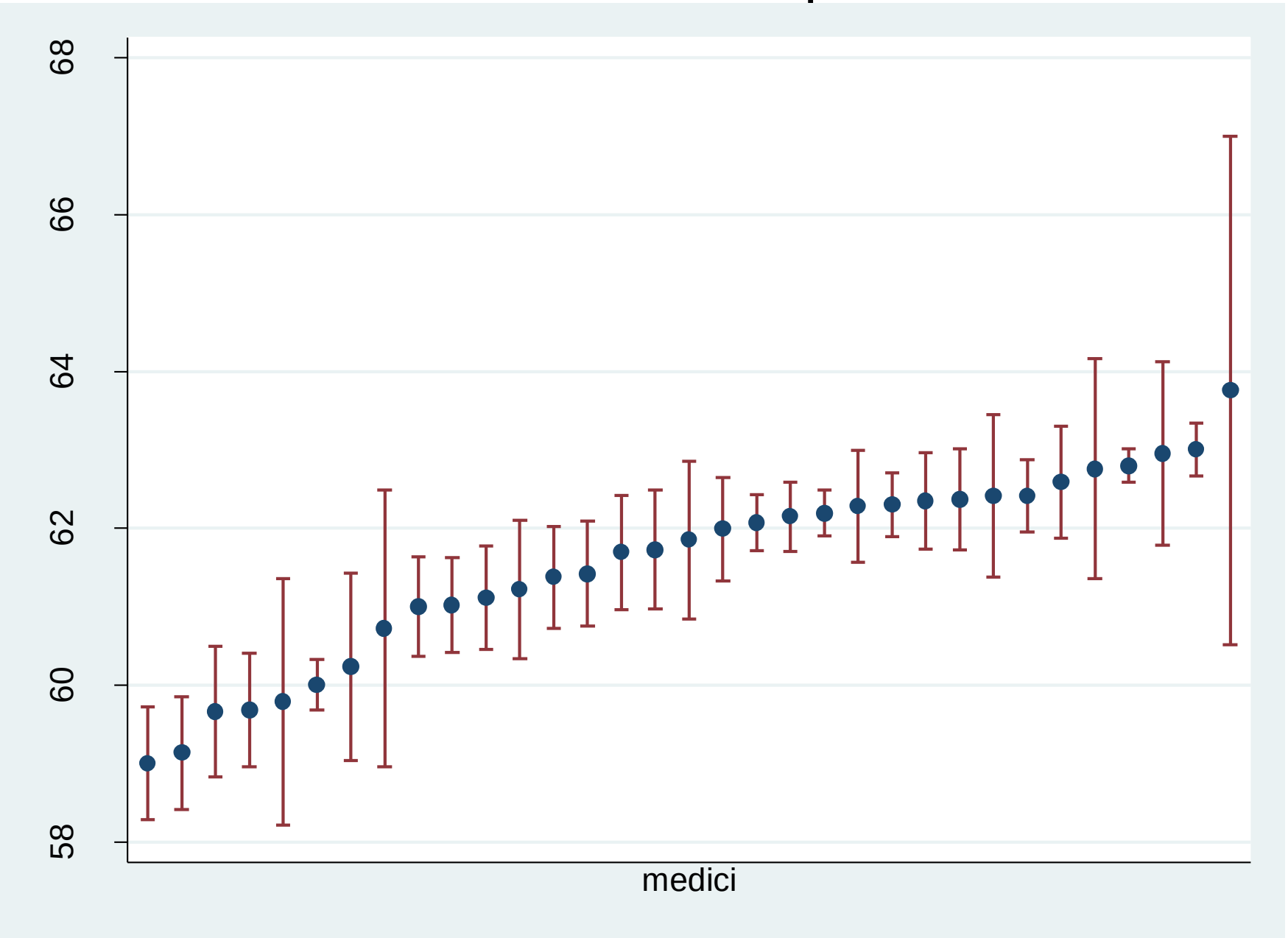
ADR per quintili n° colon di screening precedentemente eseguite da endoscopista



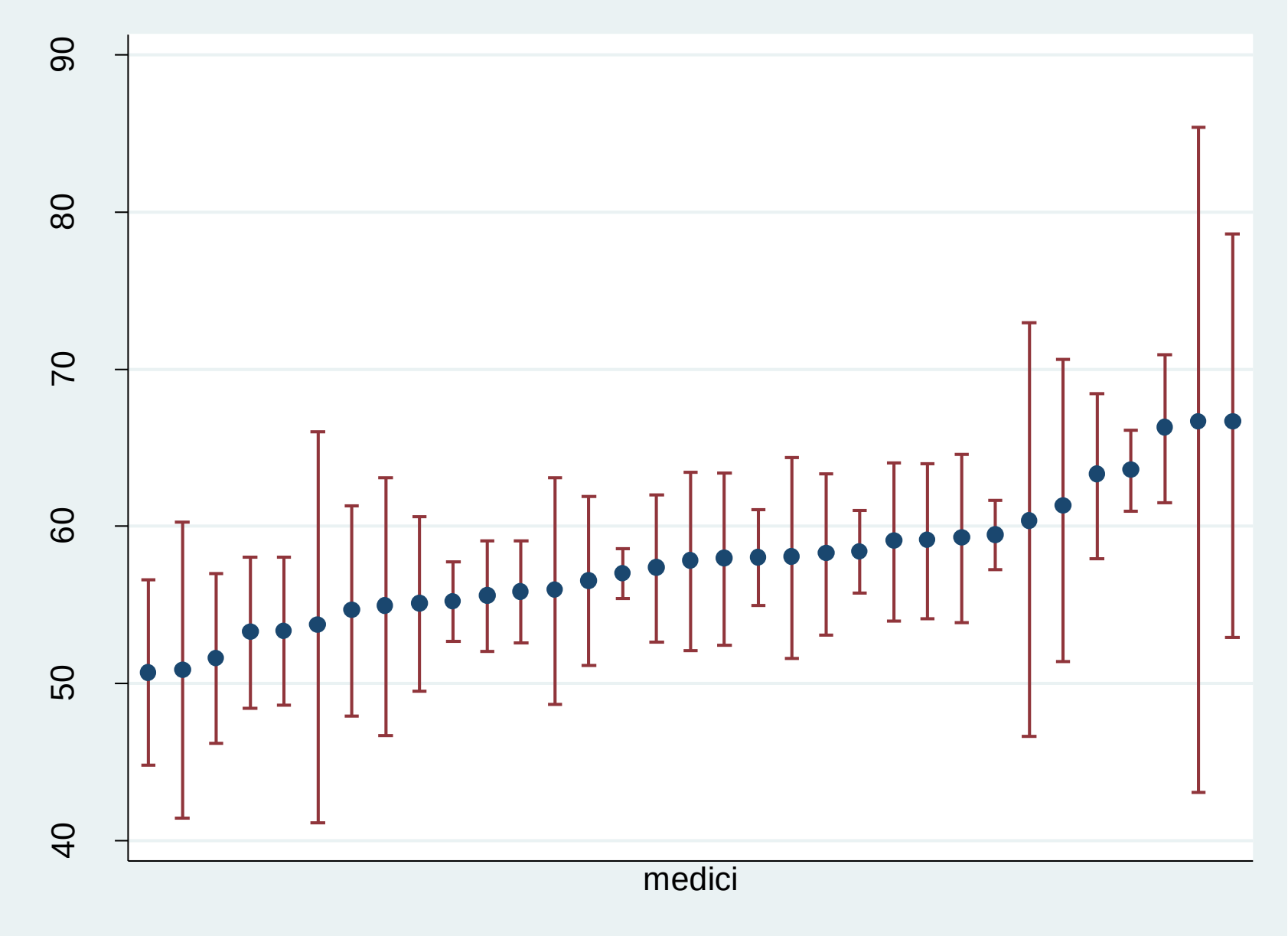
ADR per quintili n° colon di screening totali eseguite da endoscopista dal 2005 al 2018



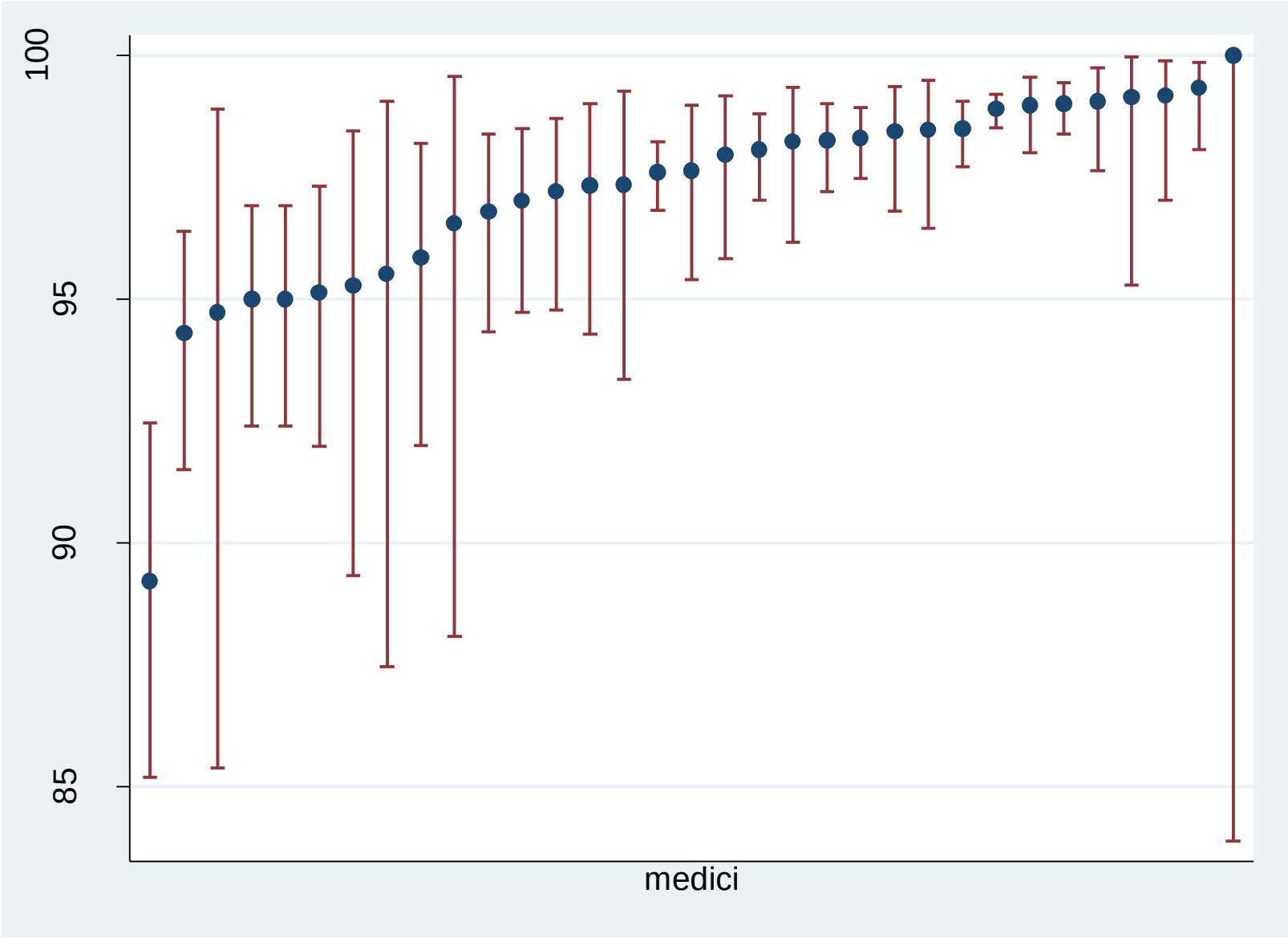
Distribuzione età screenati per medico



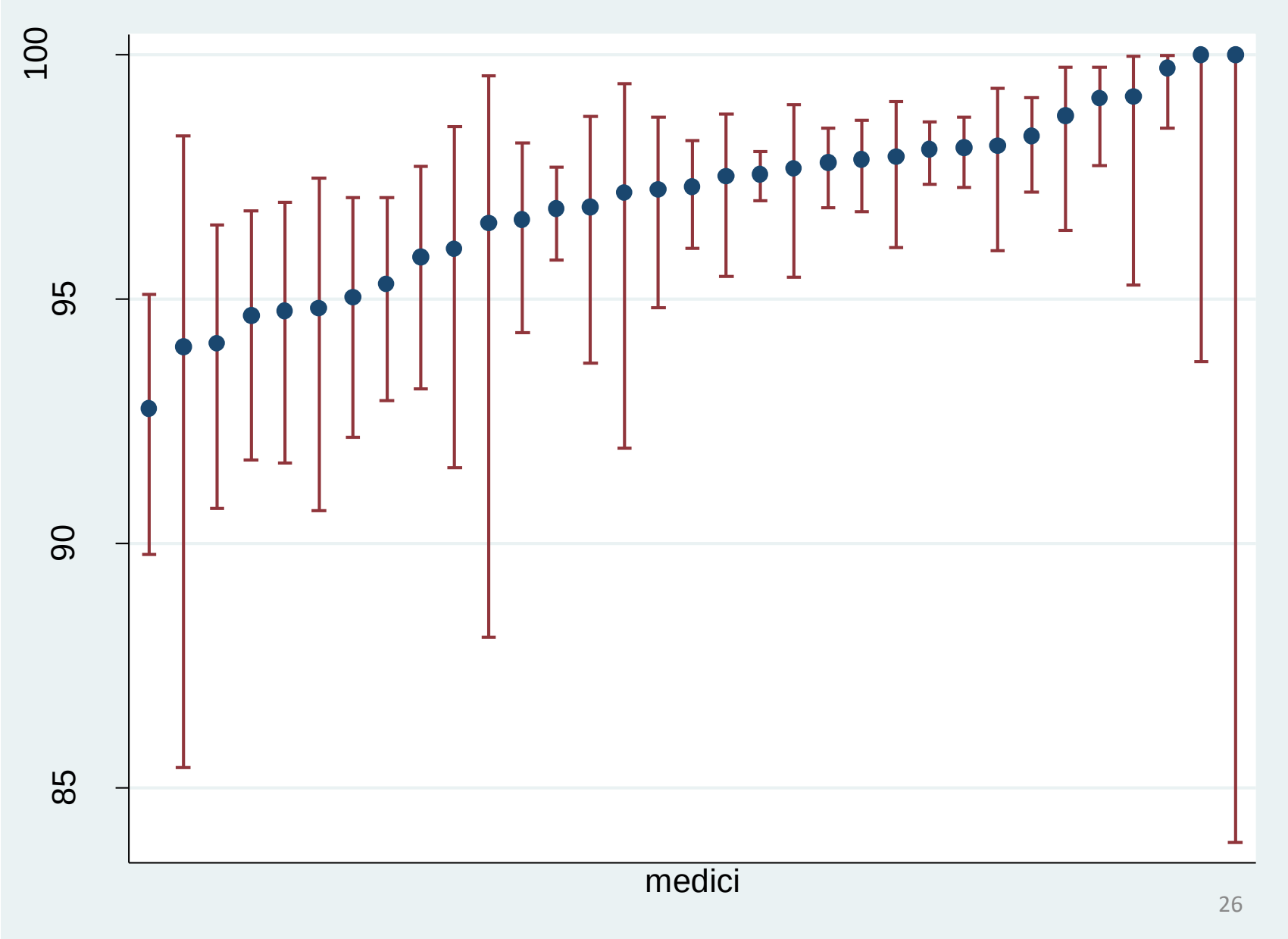
Distribuzione sesso screenati per medico



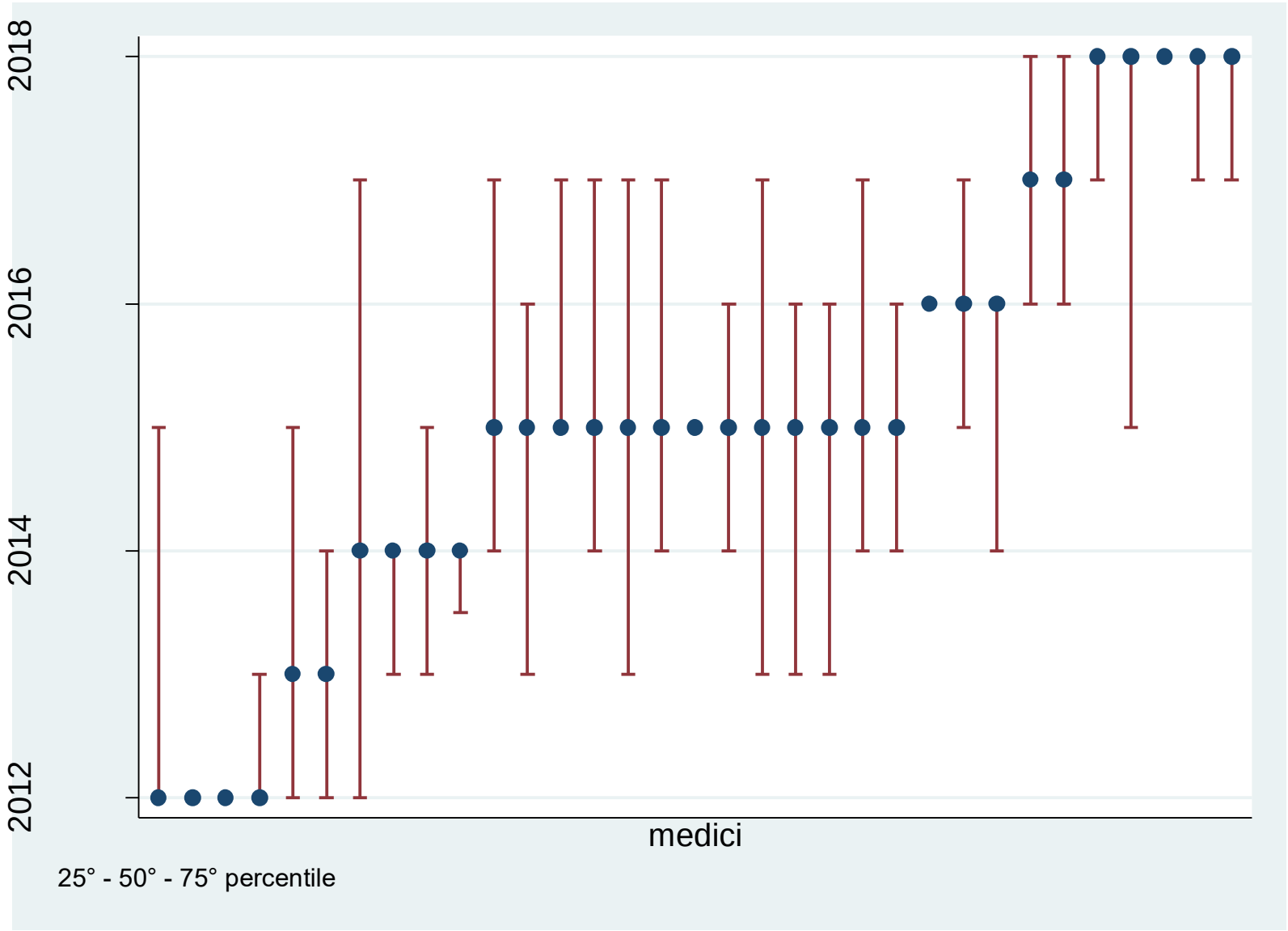
Distribuzione % colon con Visione Ottimale per medico



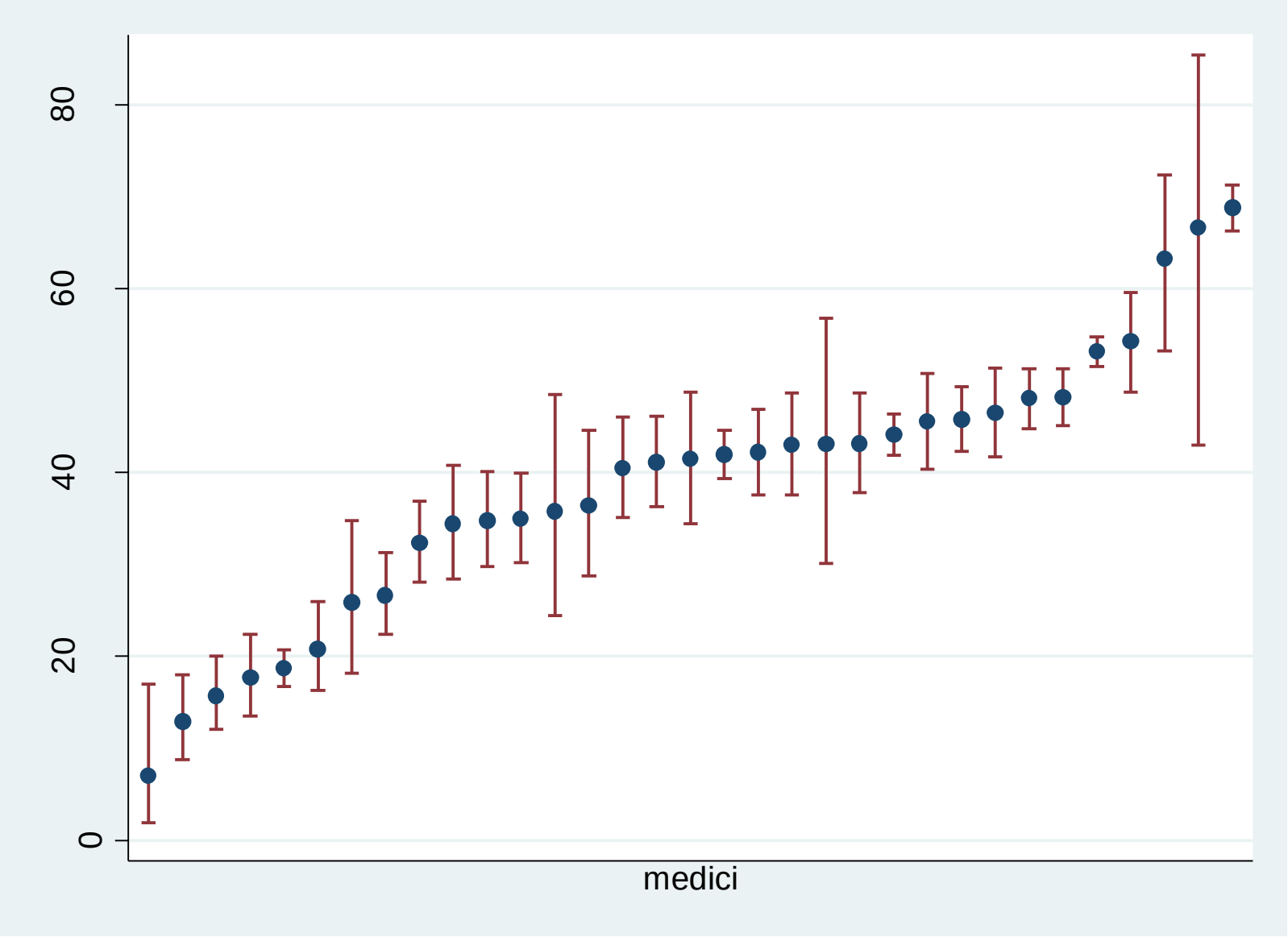
Distribuzione % colon con raggiungimento per medico



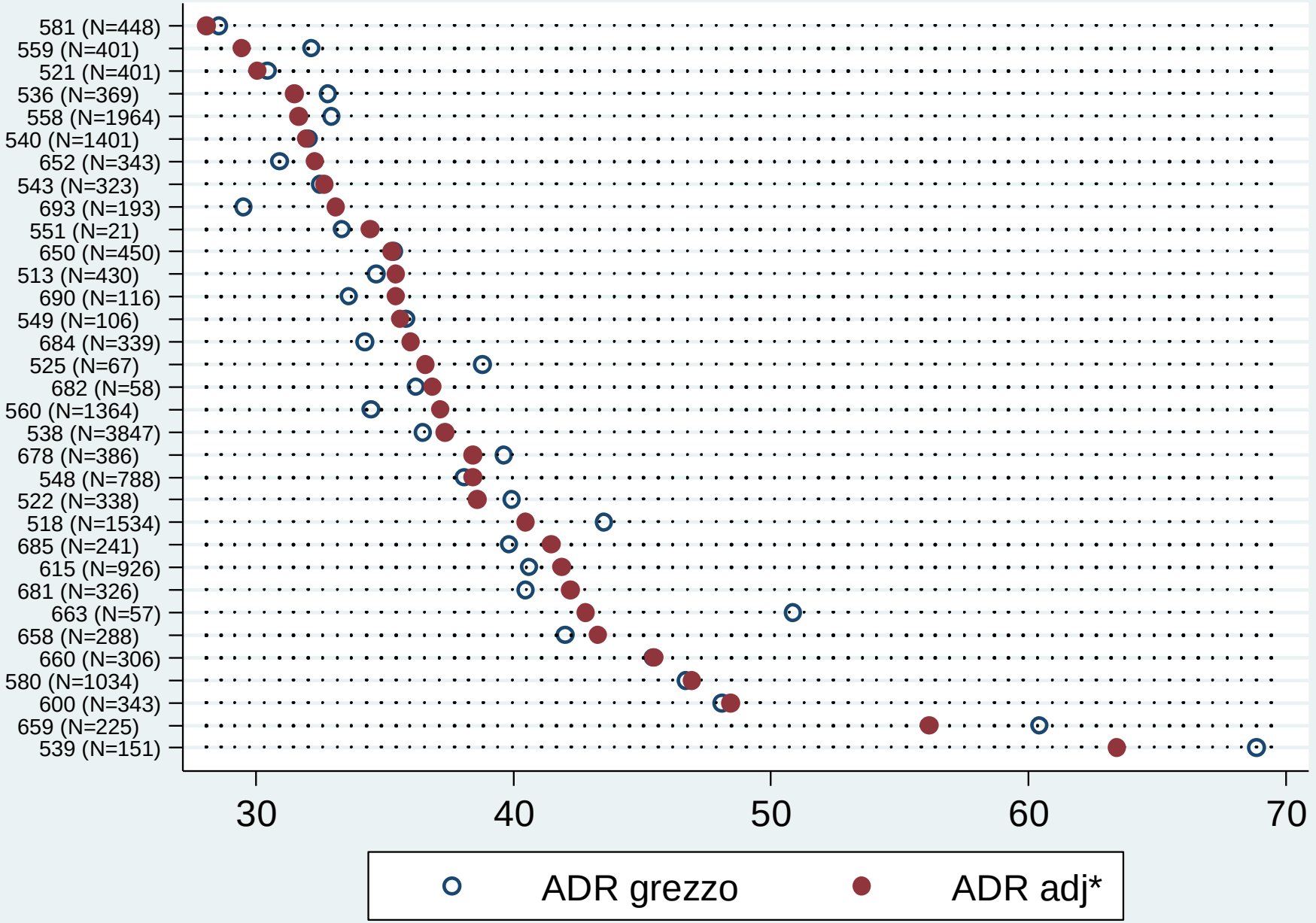
Distribuzione percentili anno esecuzione colon per medico



Distribuzione % colon di follow-up per medico

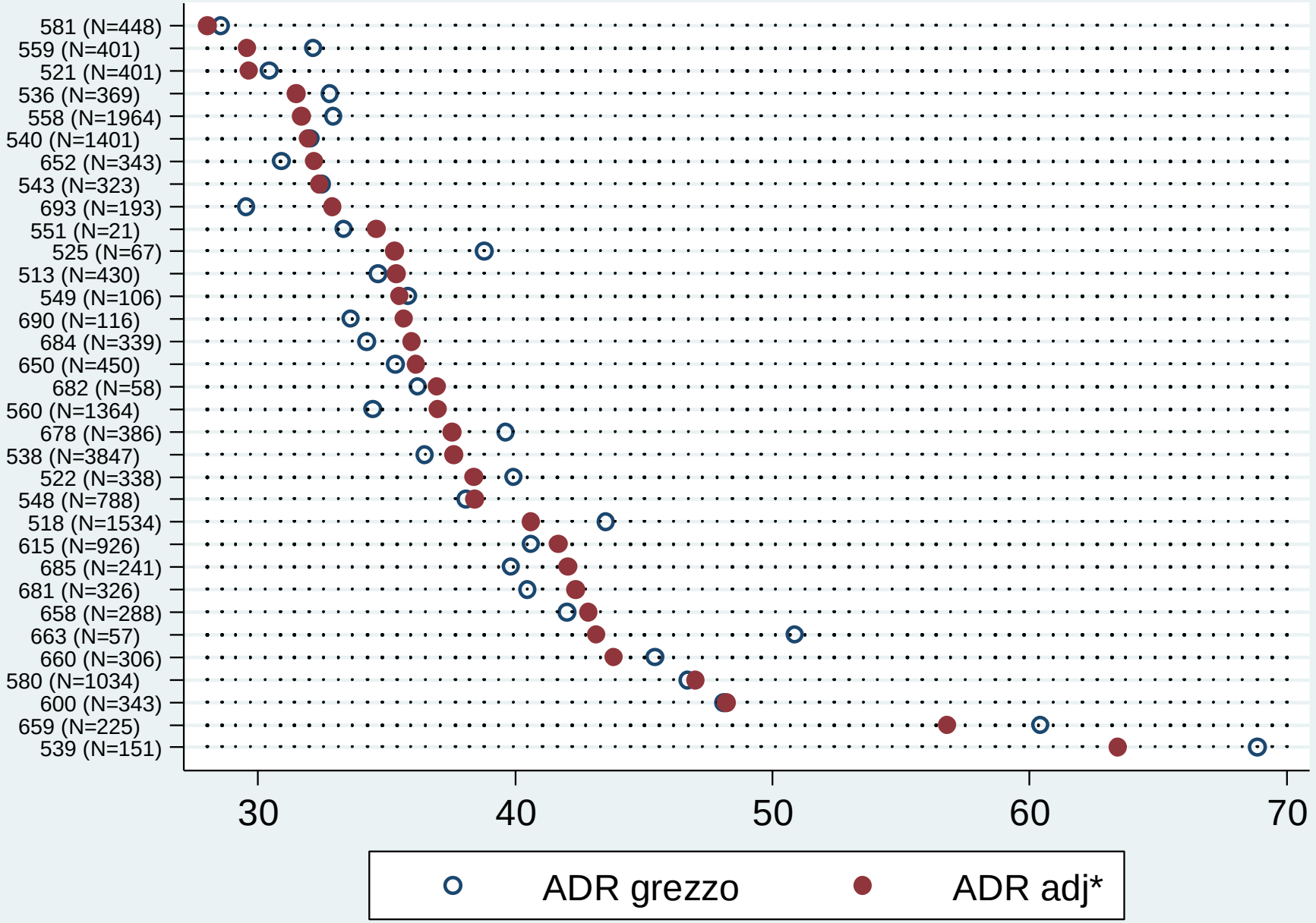


ADR grezzo vs aggiustato per anno, visione, ragg. cieco, sesso, età, follow-up



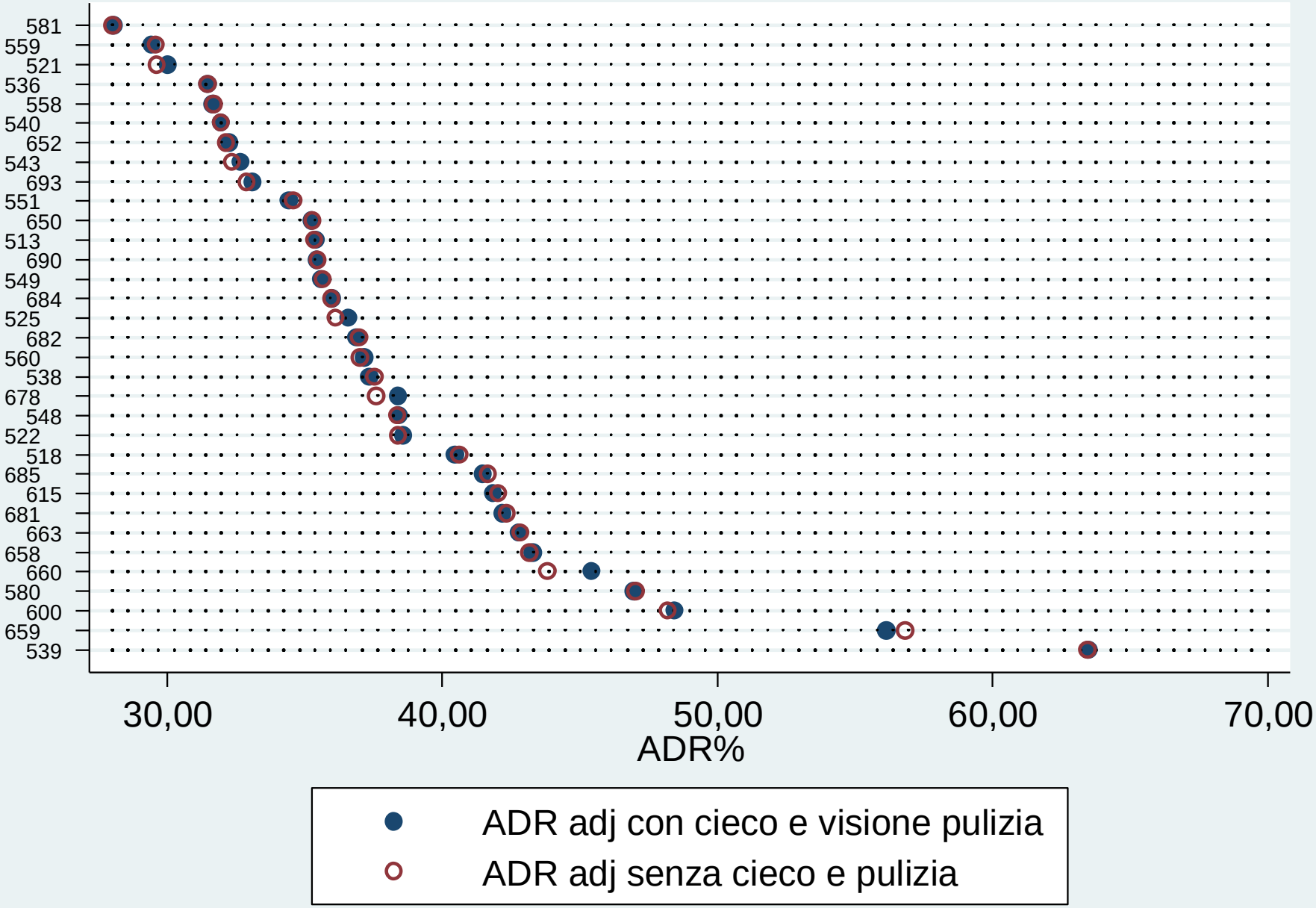
* aggiustato per anno, visione, ragg.cieco, sesso, cleta, FIT+/fwp

ADR grezzo vs aggiustato per anno,~~,~~ sesso, età, follow-up. non per ~~visione~~ e ragg. cieco



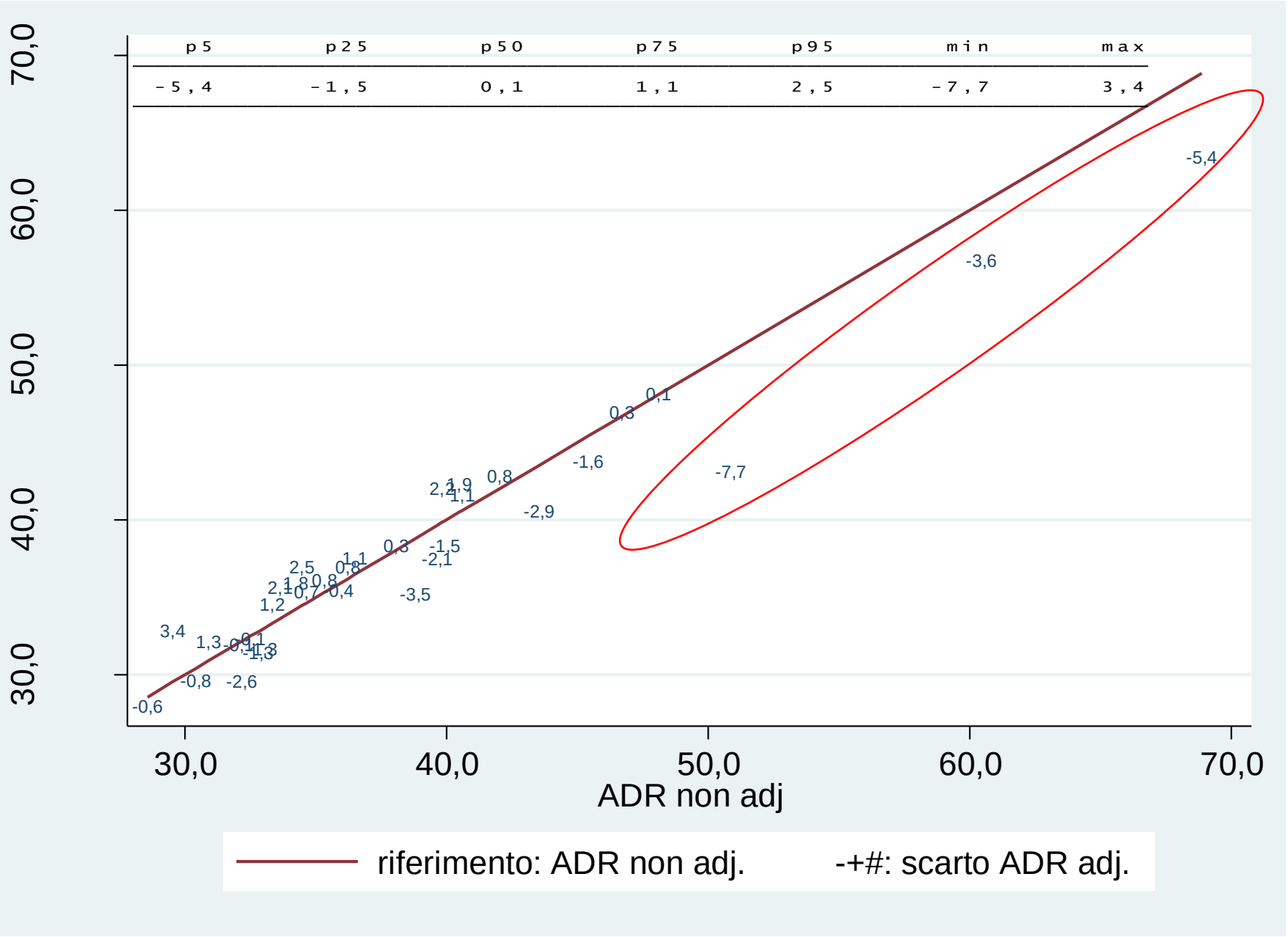
* aggiustato per anno, sesso, cleta, FIT+/fwp

Confronto ADR aggiustati con e senza visione e ragg, cieco

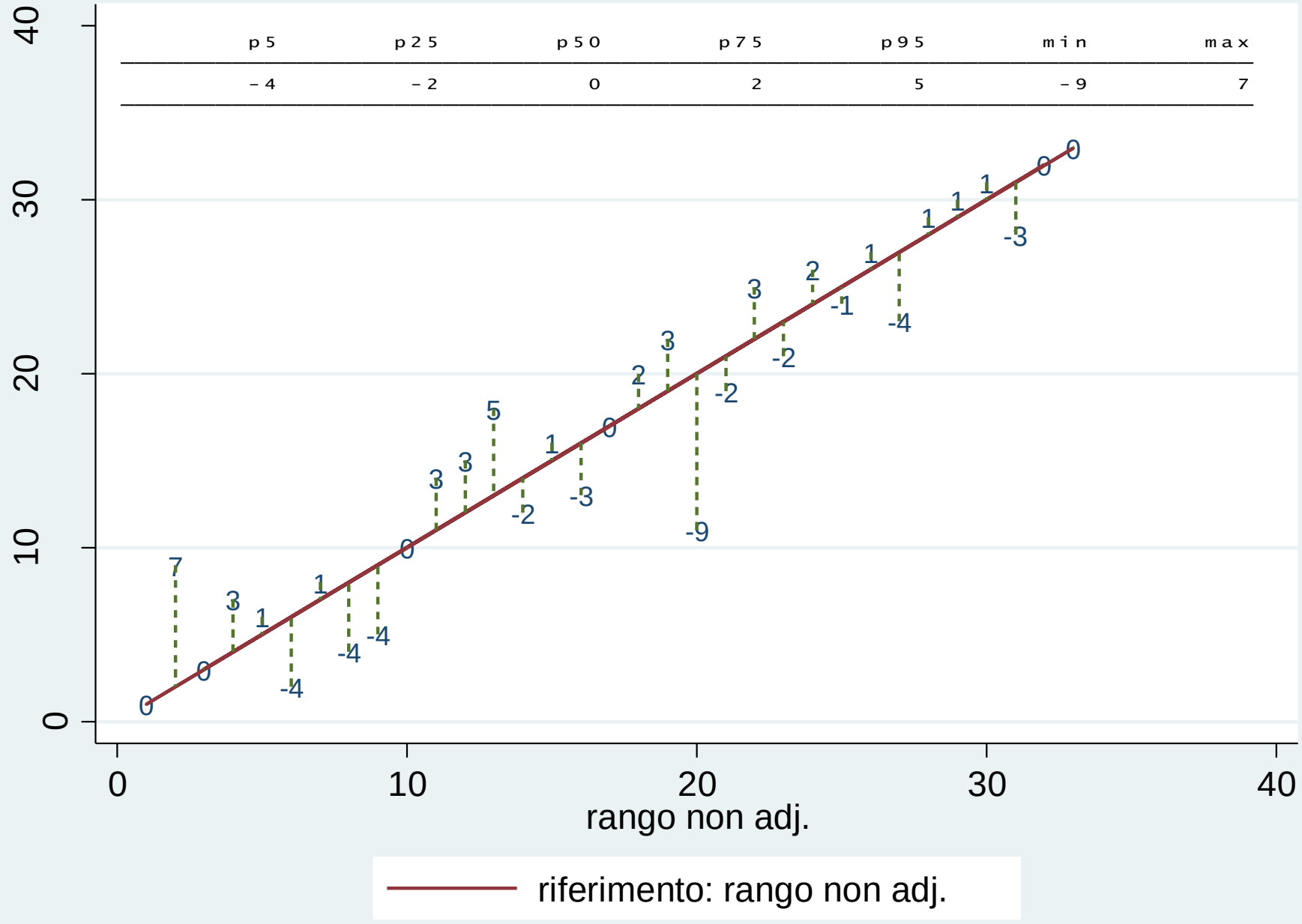


aggiustati anche per anno, sesso, cleta, FIT+/fwp

confronto ADR grezzo
vs
aggiustato per anno, sesso, età follow-up.
non per ~~visione~~
e ragg. cieco



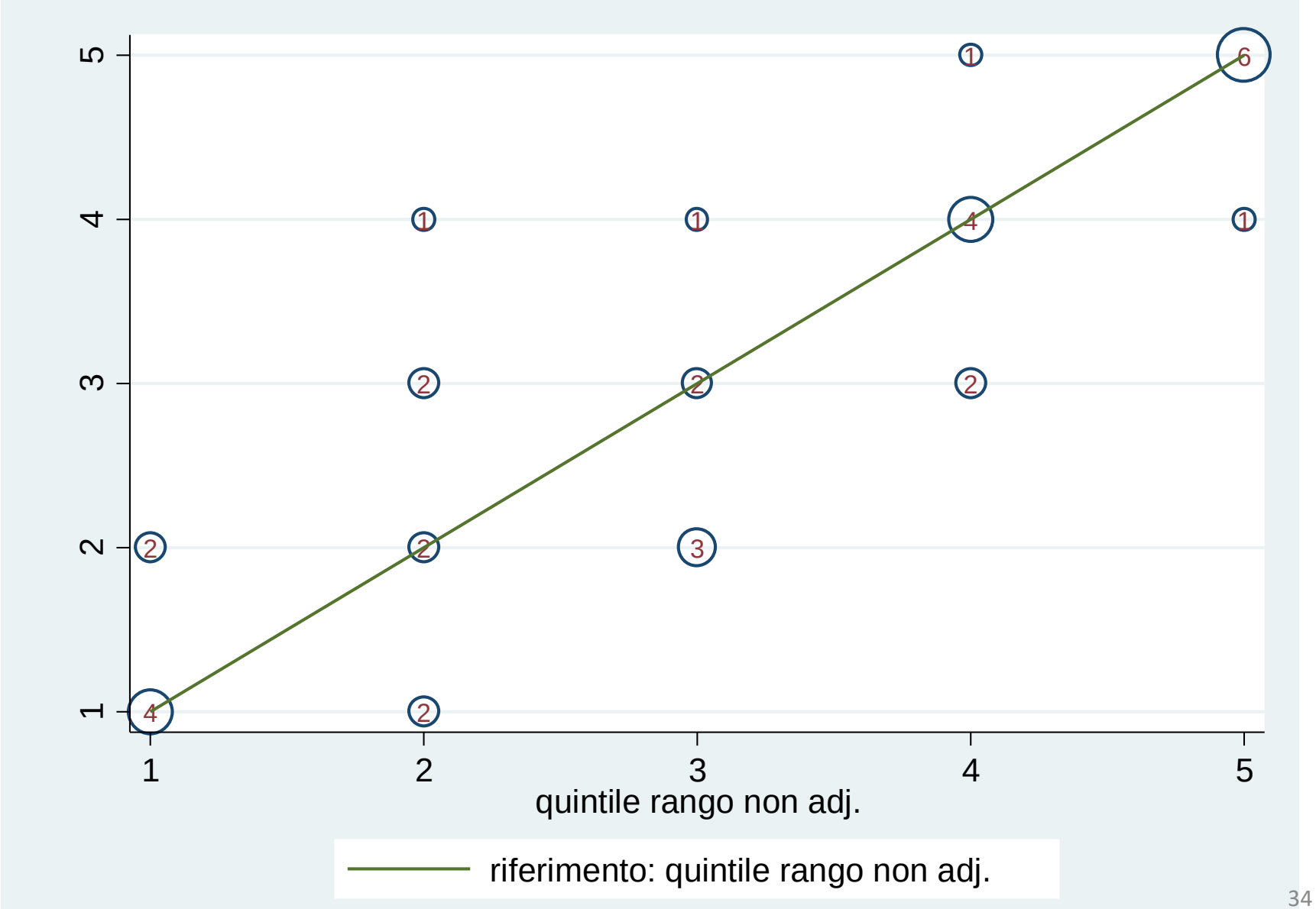
confronto ranghi
ADR
grezzo
vs
aggiustato per
anno, sesso, età,
follow-up.
non per ~~visione~~
e ragg. cieco



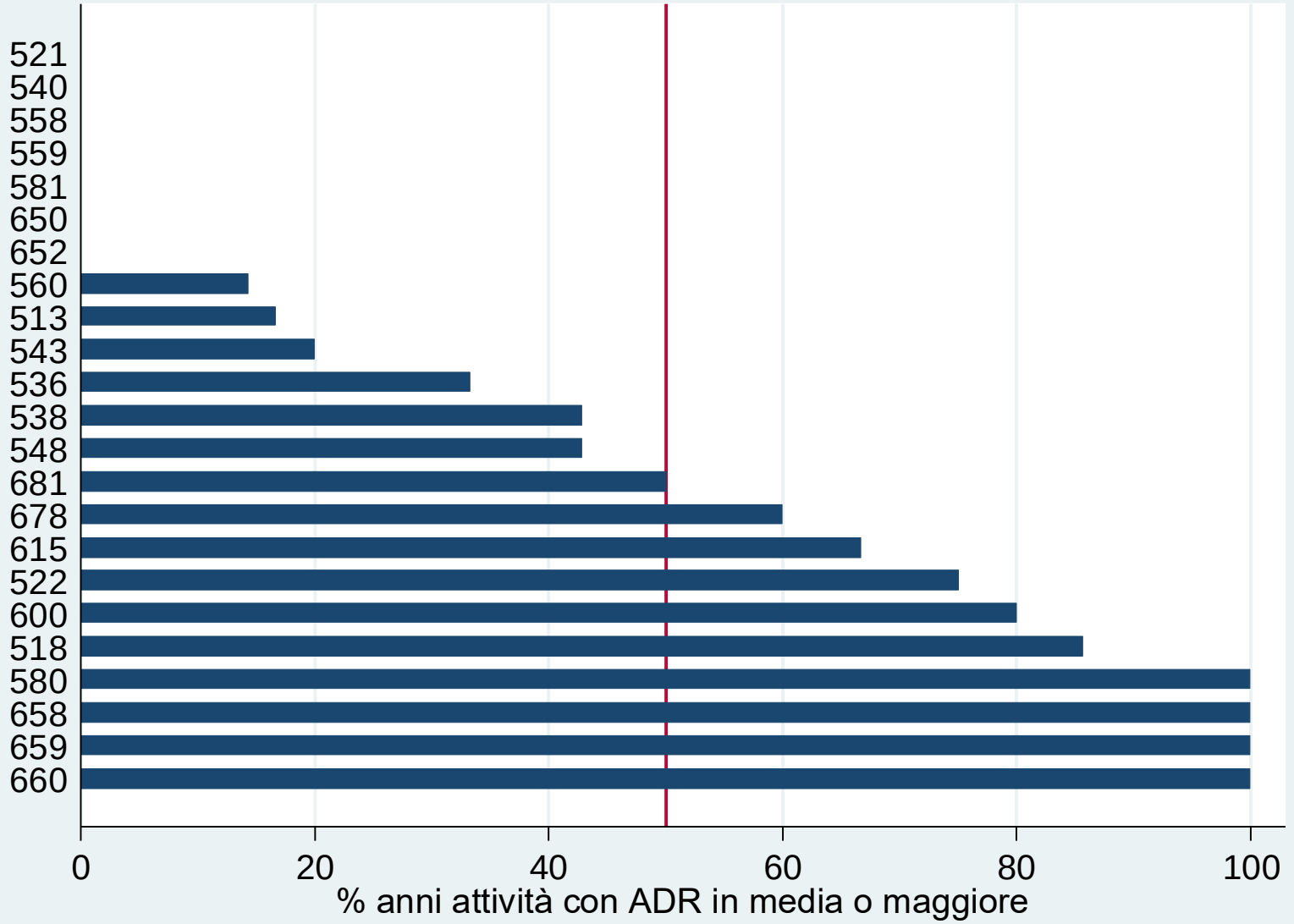
p5	p25	p50	p75	p95	min	max
-1	0	0	0	1	-2	1

confronto quintili ranghi ADR grezzo vs aggiustato per anno,-sesso, età, follow-up.

non per ~~visione~~ e ragg. cieco



Posizionamento negli anni rispetto a ADR medio in anno



Criteri:

- ADR grezzo
- Almeno 30 endoscopie in anno
- Almeno 3 anni di attività

Conclusioni

Nel programma di screening modenese, come atteso da letteratura, è presente una notevole variabilità tra endoscopisti riguardo ad un importante indicatore di qualità quale l'ADR. Questa variabilità non sembra imputabile in maniera principale ad una pur presente variabilità tra endoscopisti riguardo alla distribuzione di altre importanti variabili esplicative.

Si conferma la necessità di continuare nel percorso di confronto tra pari già avviato nella nostra AUSL, nel tentativo di perseguire un continuo miglioramento della qualità delle colonscopie. Da questi dati emerge anche che l'ADR grezzo, soprattutto se utilizzato per una ripartizione in quintili, è già di per sé uno strumento utile ai fini di un processo di benchmark; non sembra essere indispensabile il ricorso a metodi di aggiustamento per effetto altre variabili.