

Evaluation of a renal risk score in the Swiss population: consolidated results from a screening project in pharmacies in the years 2008-2013

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Introduction

Prevalence of chronic kidney disease in the Swiss population is not really known. The mostly asymptomatic progression and the low grade of awareness about kidney disease in

the general population motivated the launch of a pilot project for kidney disease information and detection. In the context of the World Kidney Day (WKD) a renal risk score was deve-

loped in 2008. During the past 6 years, this score was evaluated in screening activities in pharmacies of 9 cantons during the campaigns around WKD.



Methods

139 pharmacies in the cantons St Gallen, Vaud, Lucerne, Zug, Geneva, Aargau, Bern, Valais and Zurich participated from 2008 to 2013 in this screening activity. 2402 people were screened and their scores analysed.

The score included 12 items: age, sex, family history (FH) of chronic kidney disease, diabetes and cardiovascular diseases (myocardial infarcts and other vascular diseases), personal

history (PH) of chronic kidney disease, diabetes and cardiovascular diseases, systolic and diastolic blood pressure (2 last values of 3 sitting measurements), and albumin-to-creatinine ratio in a urine sample (mg/mmol). The responsible pharmacists were specifically trained for screening activities and consulting. Participants were interviewed in the pharmacies.

Points were attributed to each item and the sum corresponded to the risk score. Less than 2 points was defined as a low risk for kidney disease, between 2 and 4 a moderate risk and >4 an increased risk.

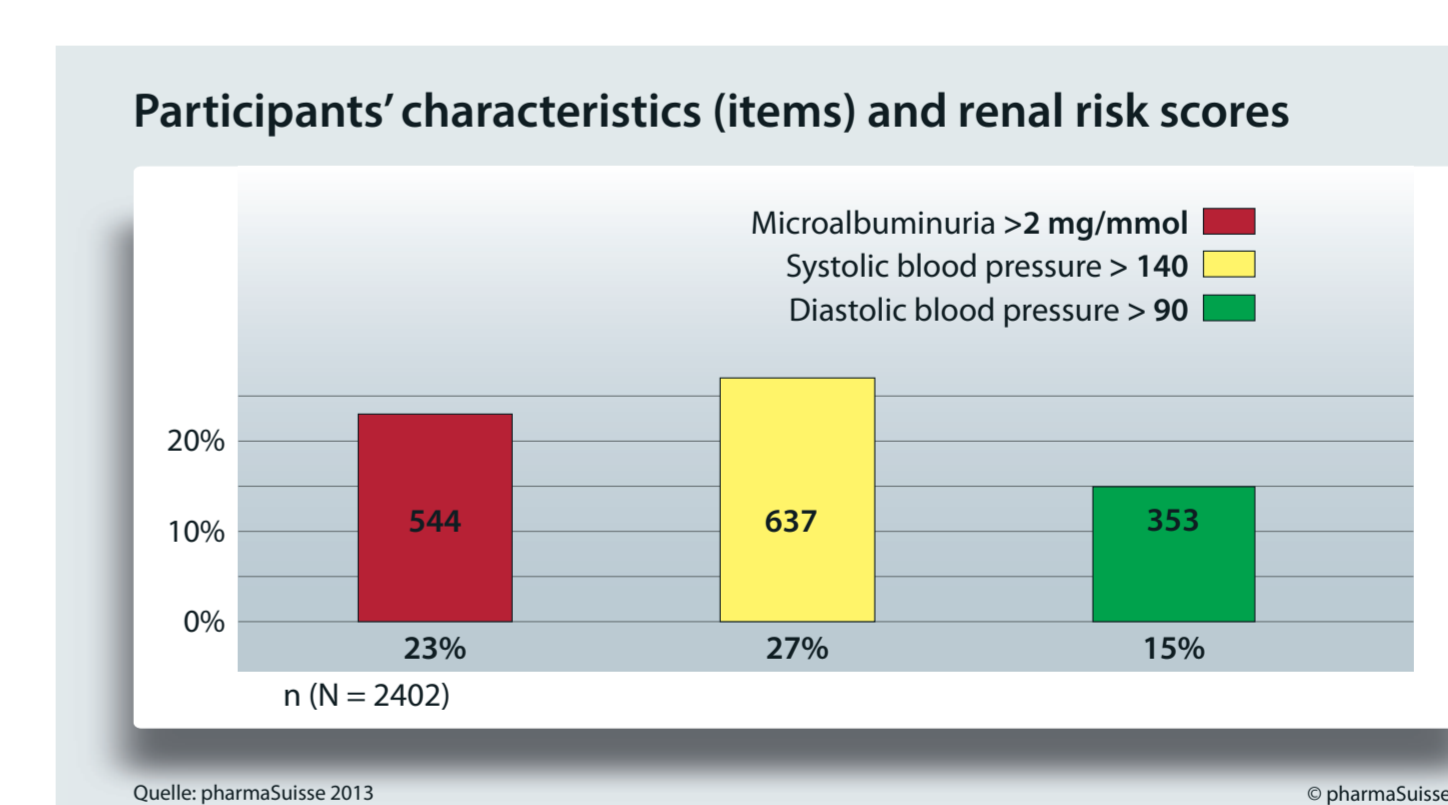
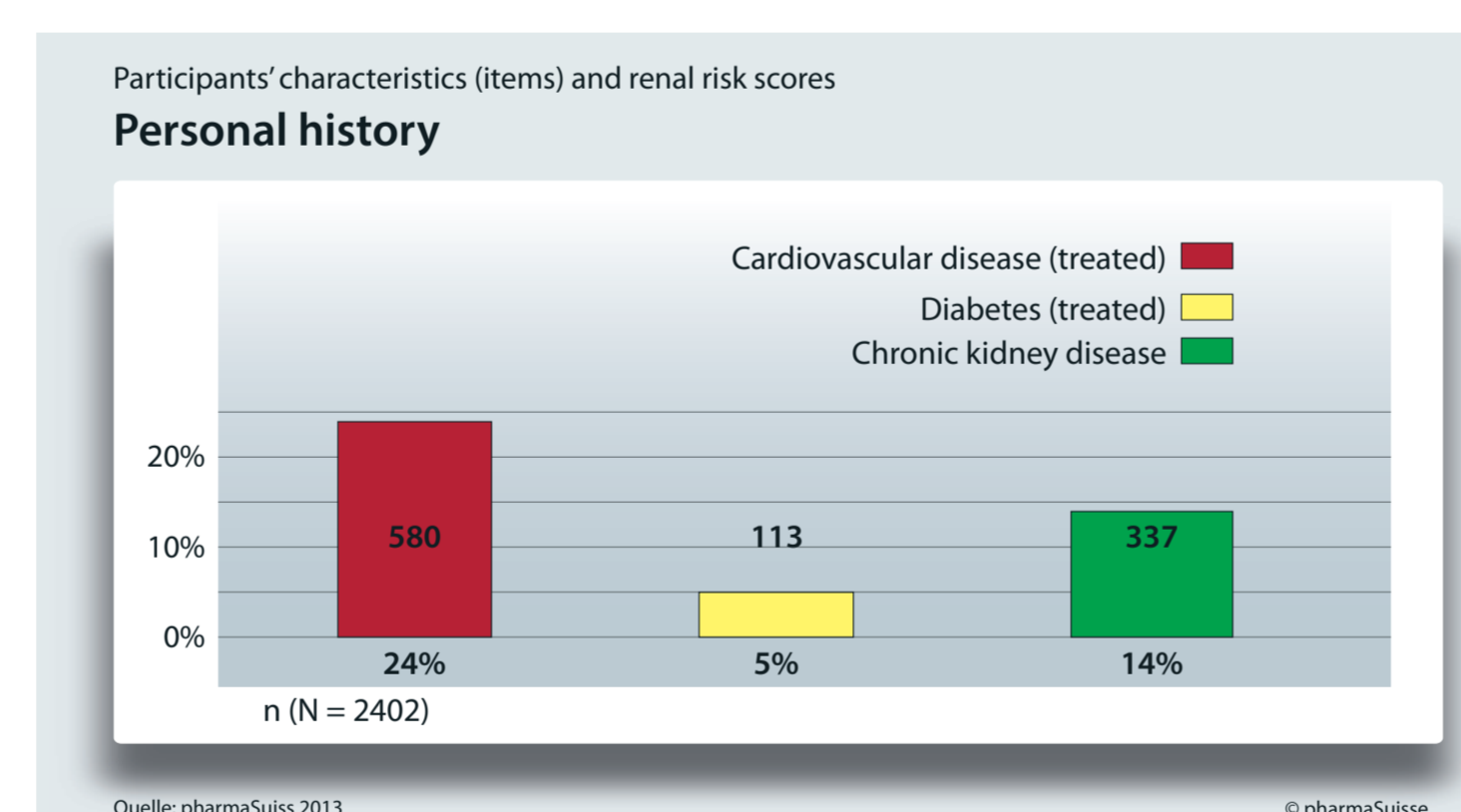
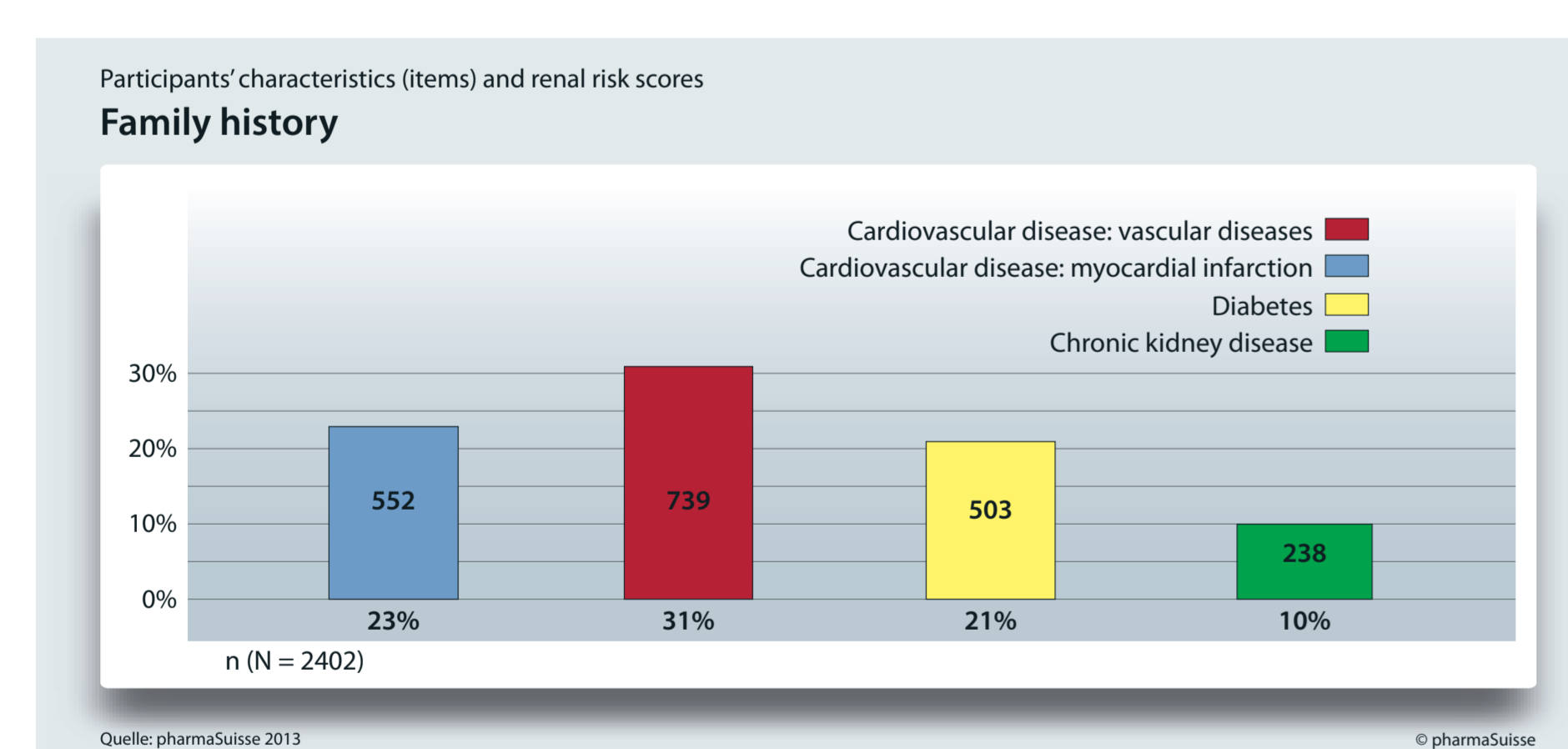
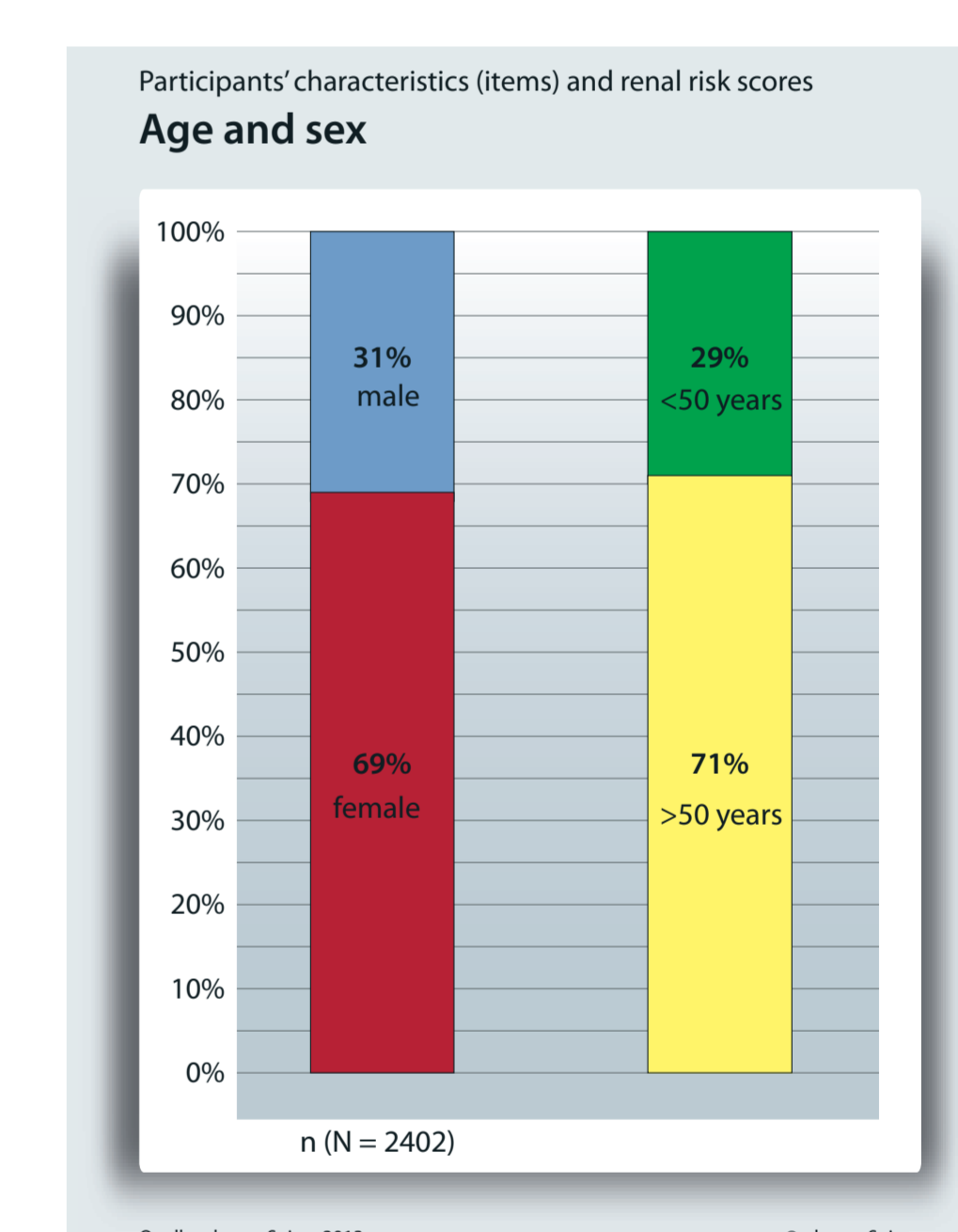
A visit to the general practitioner was recommended for persons with at least moderate risk.

Results

71% (1705/2402) of the participants were >50 years old and 69% (1658/2402) were women. There was FH of chronic kidney disease in 10% and PH in 14%, FH of diabetes in 21%, PH of treatment for diabetes in 5%, FH of myocardial infarction in 23% and of other vascular disease in 31%, and PH of treatment for cardiovascular disease in 24%. Systolic BP was elevated between 140 and 180 mmHg in 26% and >180

mmHg in 0.8% of the participants; all other participants had <140 mmHg. Diastolic BP was elevated between 90 and 110 mmHg in 14% and >110 mmHg in 0.4% of the participants; all other participants had <90 mmHg. Microalbuminuria ratio was between 2 and 20 mg/mmol in 22% of the participants and albuminuria >20 mg/mmol in 0.9%; in all others it was <2 mg/mmol. Overall 39%

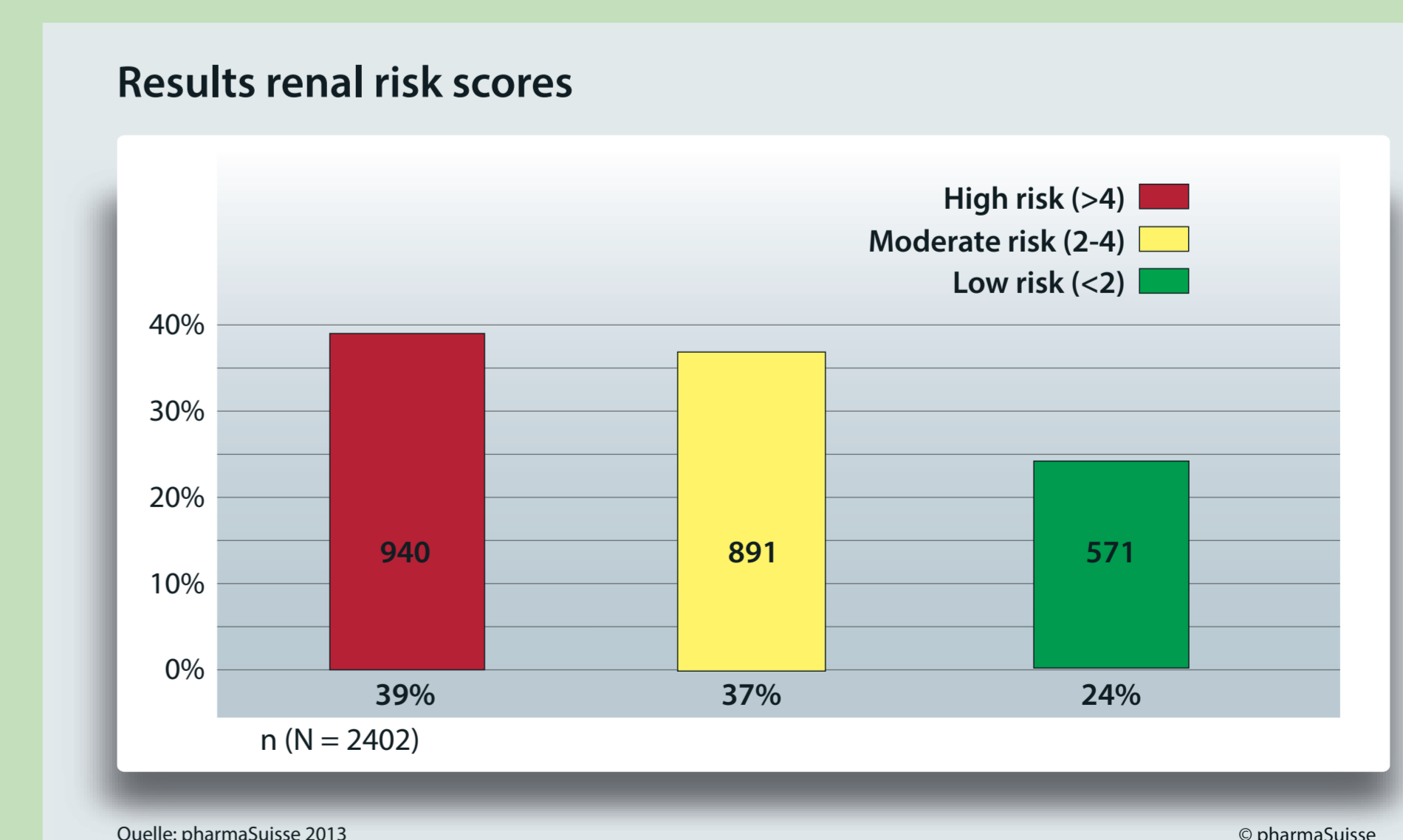
(940/2402) showed a high risk score, 37% (891/2402) a moderate score and 24% (571/2402) a low score.



Conclusion

76% of the participants showed a moderate or high renal risk score. Participants in this pharmacy based screening programme were mostly women >50 years old and persons with known risk factors for kidney disease. Concerns due to the high proportion of FH or PH of kidney disease, diabetes or cardiovascular disease might have motivated these participants to undergo

the risk evaluation. A comparison with the results of the large CoLaus cohort study (n=6188, aged 35-75) which found microalbuminuria in 6.3% of the population, substantiates such a putative selection bias.¹ For 6 years, this successful chronic kidney disease screening activity in pharmacies has allowed acquisition of useful epidemiological data in Switzerland.



1) Firmann, M., et al., The CoLaus study: a population-based study to investigate the epidemiology and genetic determinants of cardiovascular risk factors and metabolic syndrome. BMC Cardiovasc Disord, 2008, 8: p. 6.

Patronage: