

# Evaluation of a renal risk score in the Swiss population: consolidated results from a screening project in pharmacies in the years 2008-2010

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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 a pilot project for information and detection. In the context of the World Kidney Day (WKD) a renal risk score was developed in 2008. During the past

3 years, this score was evaluated in screening activities in pharmacies of 6 cantons/regions during the week of WKD.



## Methods

62 pharmacies in the cantons St Gallen, Vaud, Lucerne, Zug, Geneva and Aargau participated from 2008 to 2010 in this screening activity. 800 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.

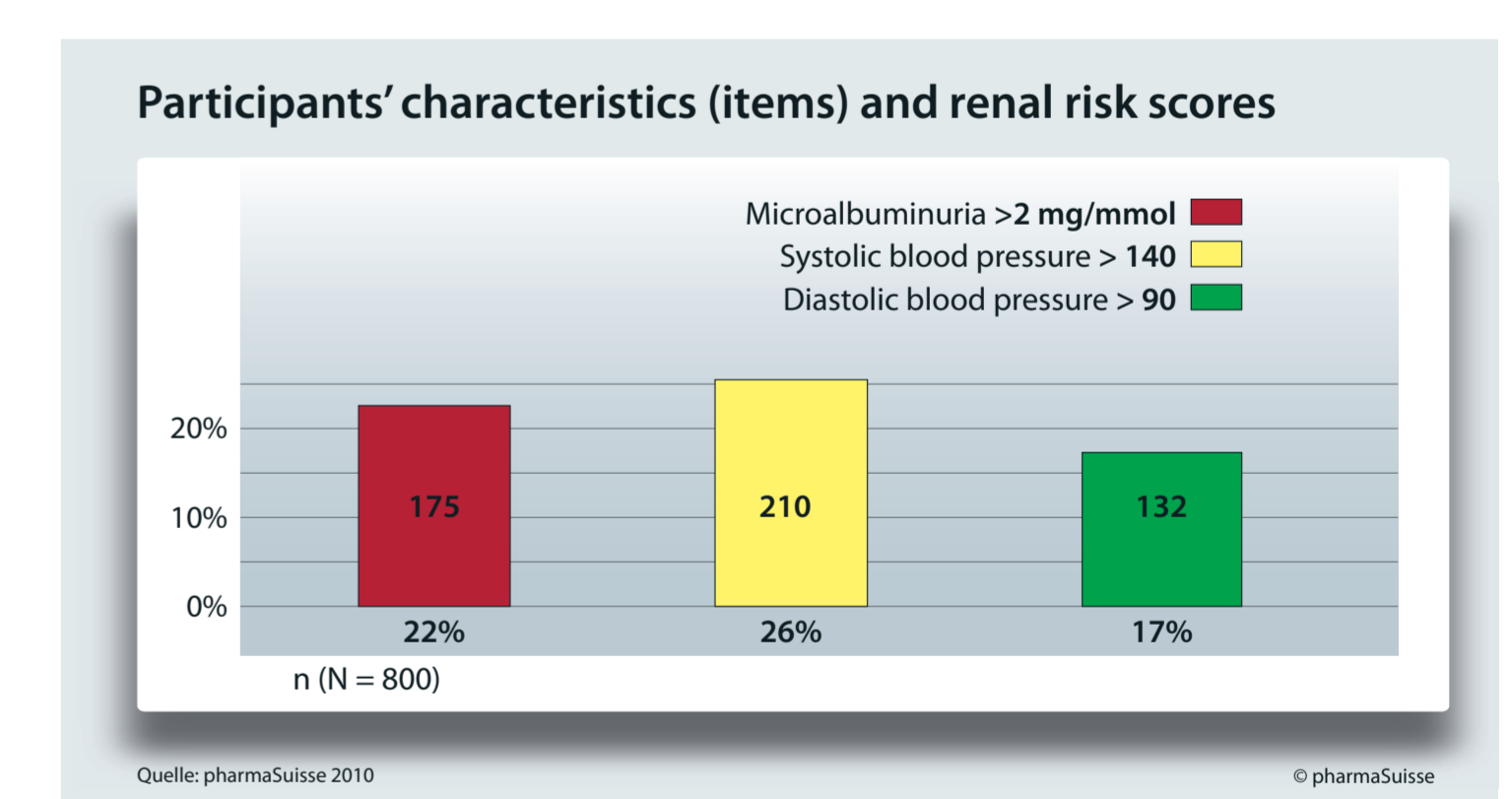
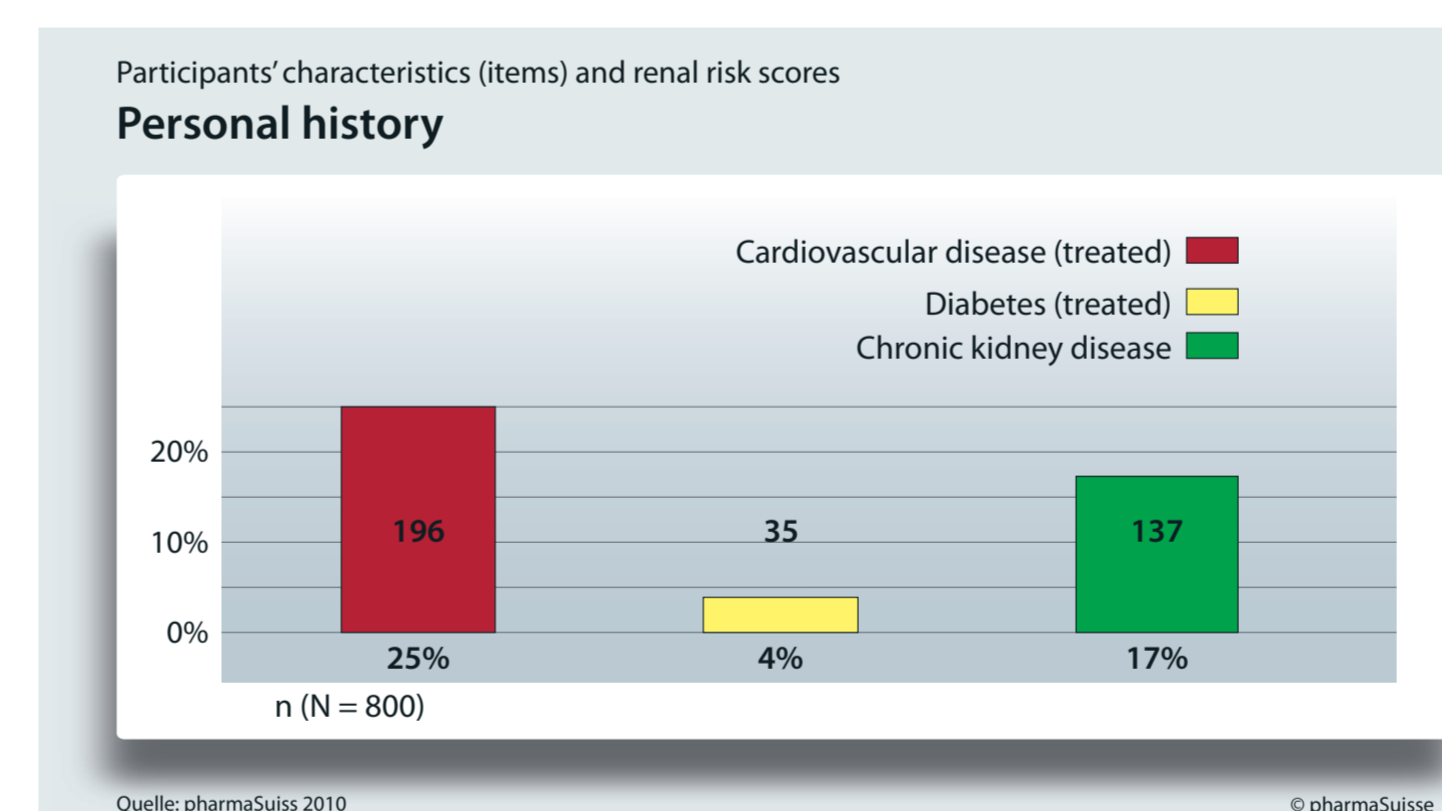
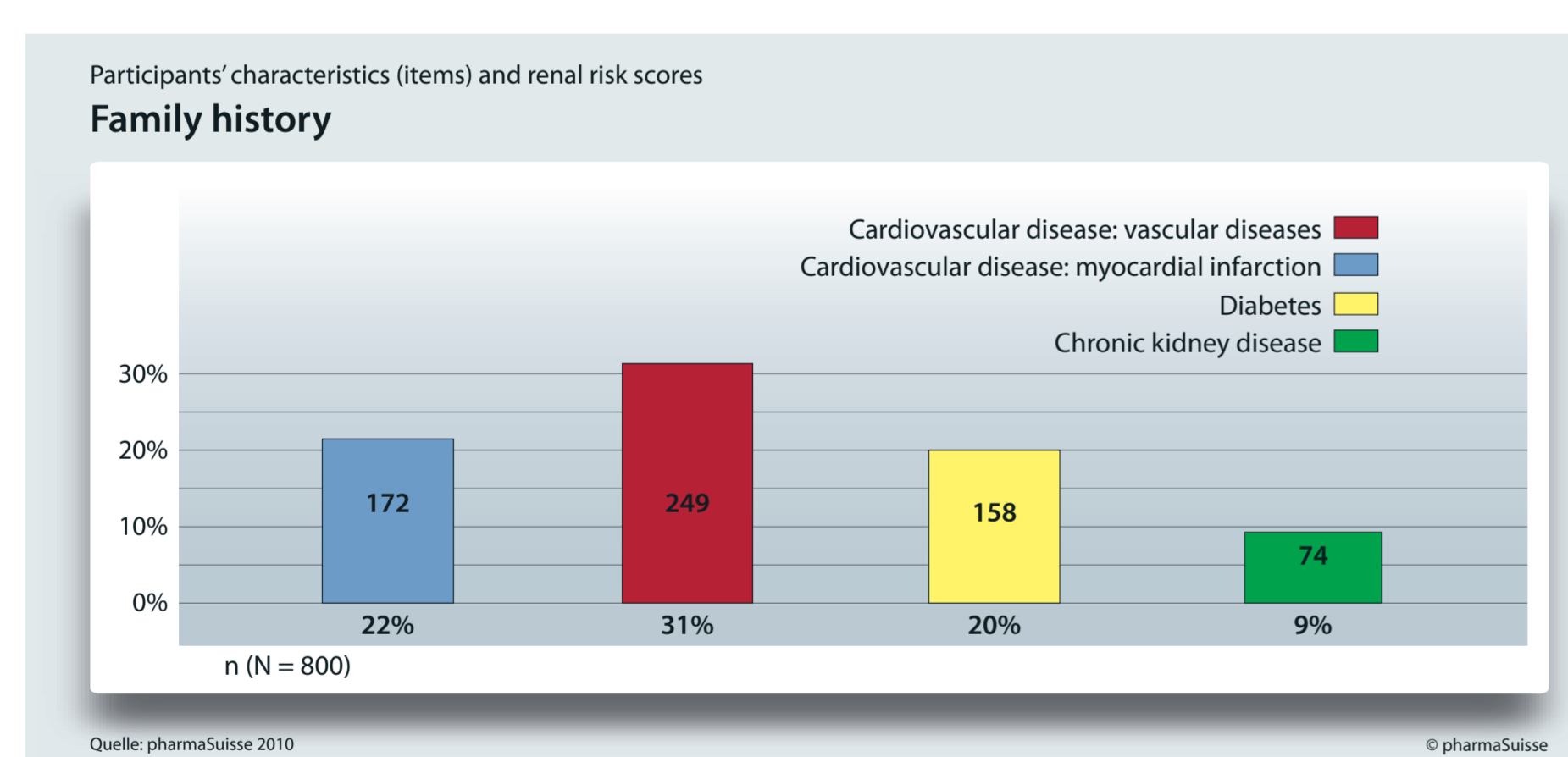
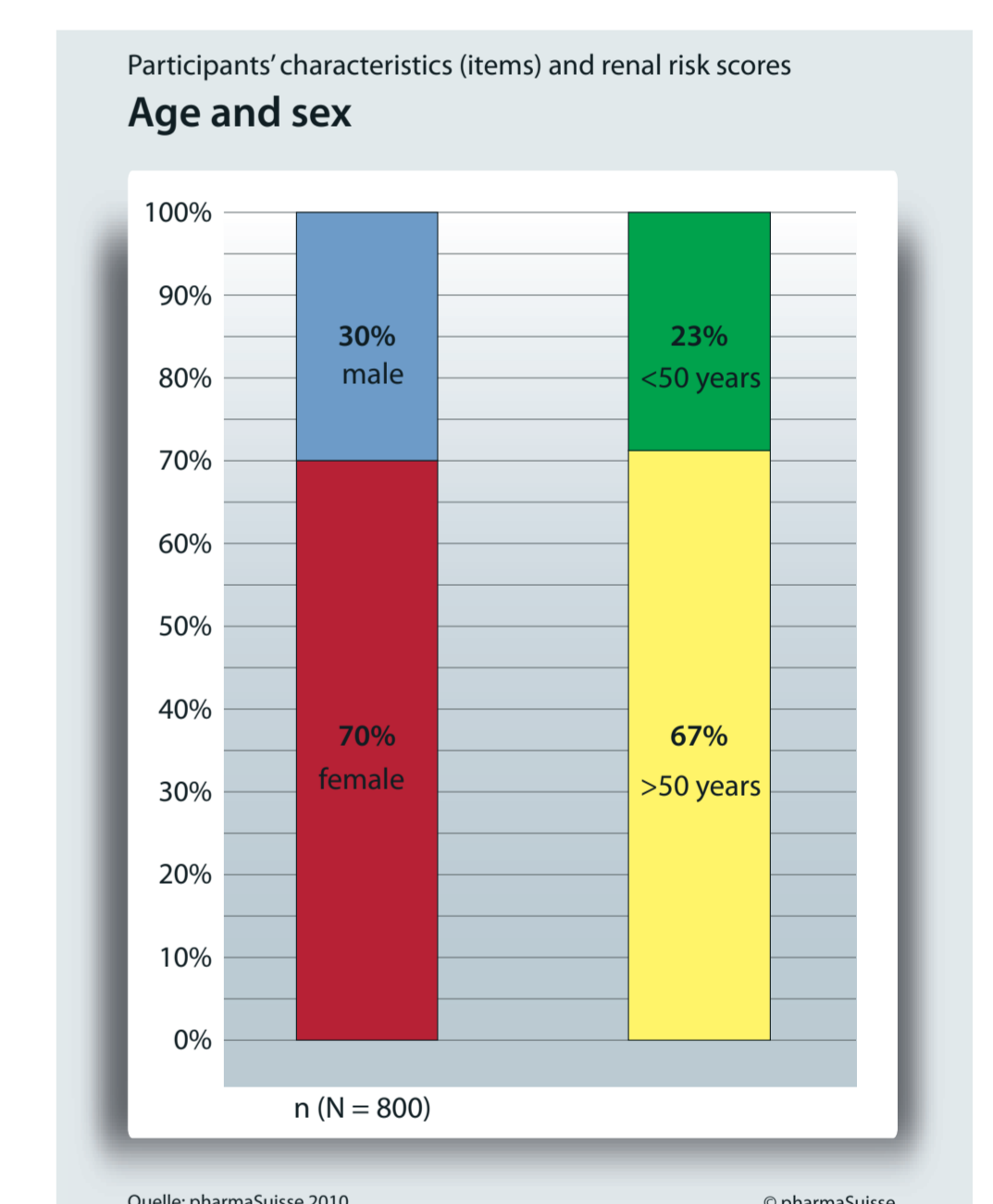
A visit to the general practitioner was recommended for persons with at least moderate risk.

## Results

67% (537/800) of the participants were >50 years old and 70% (562/800) were women. There was FH of chronic kidney disease in 9% and PH in 17%, FH of diabetes in 20%, PH of treatment for diabetes in 4%, FH of myocardial infarction in 22% and of other vascular disease in 31%, and PH of treatment for cardiovascular disease in 25%. Systolic BP was elevated between

140 and 180 mmHg in 25% of participants and >180 mmHg in 1%; in all other participants it was <140 mmHg. Diastolic BP was elevated between 90 and 110 mmHg in 16% of participants and to >110 mmHg in 0.4%; in all other participants, it was <90 mmHg. Microalbuminuria ratio was between 2 and 20 mg/mmol in 21% of the participants and albumi-

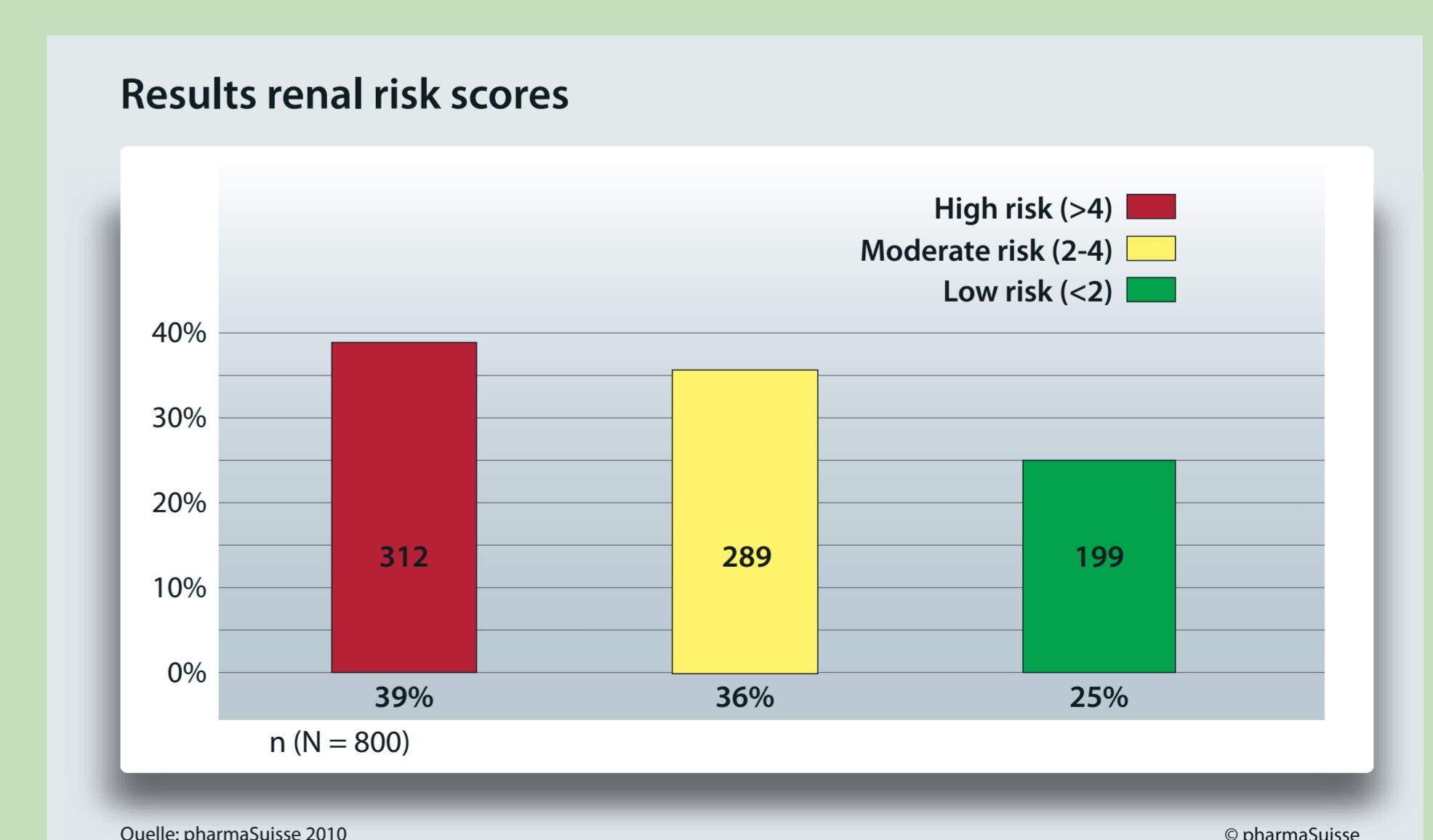
nuria >20 mg/mmol in 0.8%; in all others it was <2 mg/mmol. Overall 39% (312/800) showed a high risk score, 36% (289/800) a moderate score and 25% (199/800) a low score.



## Conclusion

75% of the participants showed a moderate or high renal risk score. Participants in this screening programme in pharmacies 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.<sup>1</sup> For 3 years, this successful chronic kidney disease screening activity in pharmacies has allowed acquisition of useful epidemiological data in Switzerland. In 2011, this programme will take place in two new cantons.



<sup>1</sup> 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: