

ASSESSING THE RISK OF OSTEOPOROTIC FRACTURE IN HEALTHY SUBJECTS: AN OBSERVATIONAL STUDY IN ITALIAN COMMUNITY PHARMACIES

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INTRODUCTION

Osteoporotic bone fracture risk is usually assessed in subjects that refer to bone centers, however, few data are available in subjects considered healthy.

Therefore, we performed an observational study with the aim of:

- ➔ Understand the feasibility of a screening on the Italian general population performed in **community pharmacies**;
- ➔ Quantify the **fracture risk** in healthy subjects;
- ➔ Determine the influence of **gender** and **age** on fracture risk in this population.

METHODS

Six community pharmacies participated to the study. All the subjects that, in the period November 2014 – May 2015:

- Had **at least 55 years**;
 - **Did not have an history of past diseases** known to affect fracture risk;
 - Agreed to participate to the study;
- were included in the study.

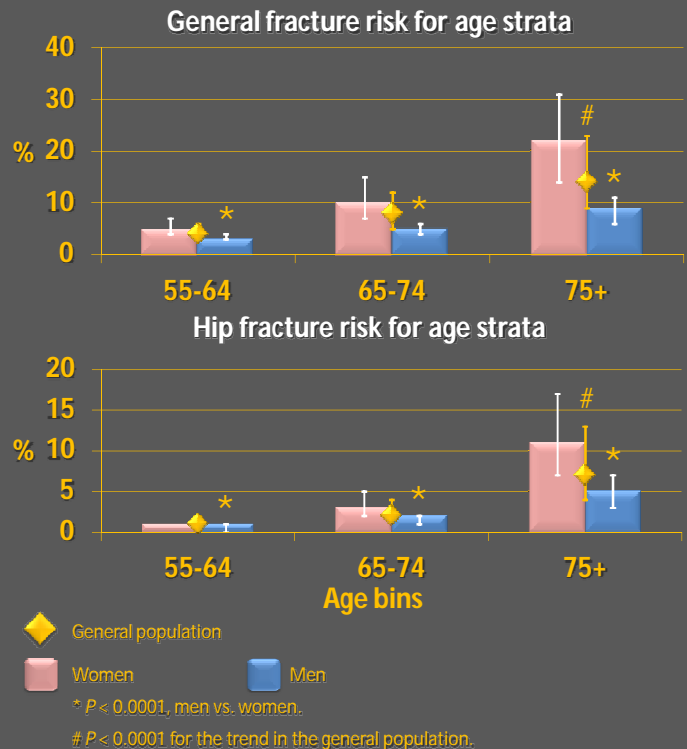
Subjects were asked to fill a questionnaire that allowed for the calculation of 10 year-general and hip fracture, through the **FRAX algorithm**.

Results are presented as percentages or median (interquartile range). Group comparisons were performed by means of Chi-square test, Mann-Whitney test or Kruskal-Wallis ANOVA.

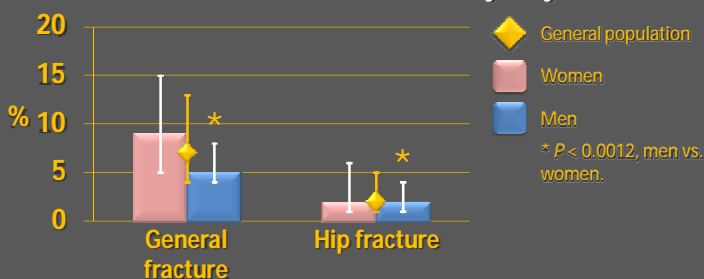
RESULTS

	General population	Women	Men
Group (N)	799	540	259
Age	66 (60-74)	65 (59-73)	69 (63-76) ***
Height	162 (158-168)	160 (155-163)	170 (166-175) ***
Weight	70 (60-78)	65 (59-72)	78 (70-85) ***
BMI	26.0 (23.4-28.7)	25.6 (22.7-28.4)	26.5 (24.8-29.1) ***
Past fractures (%)	18	20	14
Parents with fractured femur (%)	17	16	11
Smoke habit (%)	13	11	17 *
Regular alcohol consumption	6	3	11 ***
Use of corticosteroids (%)	5	6	4
Secondary osteoporosis	10	14	0 ***

* P < 0.05; *** P < 0.001, men vs. women.



Median fracture risk in healthy subjects



CONCLUSIONS

- **Community pharmacies** represent a valuable hotspot for a quick and economic screening aimed at finding apparently healthy subjects with an high fracture risk.
- **A considerable part of subjects considered healthy**, that do not refer to bone centers, actually are at high risk of fracture, and need to be early detected in order to prevent fractures to occur.
- Also in healthy subjects, **age** and **female gender** are positively associated to an **increased risk of fracture**.
- It is important to assess fracture risk also in men.