These results are supplied for informational purposes only.
Prescribing decisions should be made based on the approved package insert in the country of prescription.

Sponsor: Sanofi **Drug substance(s):** HOE498	**Study Identifiers:** U1111-1193-0859 **Study code:** RAMIP_L_03123
Title of the study: A Study of Patients Treated with Ramipril for Cardiovascular Risk Reduction The HOPE Tips: The HOPE Study Translated Into Practices	
Study center(s): 25 active centers in Indonesia	
Study period: Date first patient enrolled: 01/Nov/2008 Date last patient completed: 23/Apr/2010	
Phase of development: Phase 4	
Objectives: Primary objective: • To document the tolerability of patients receiving study medication at 12-week of therapy in terms of the scoring system assessed by the investigator. Secondary objectives: • To document drug safety at 12-week of treatment in terms of number of Adverse Drug Reaction or Serious Adverse Drug Reaction reported. • To describe the population treated as per the HOPE study indication in current clinical practice (demographics, cardiovascular risk-factors at treatment initiation, concomitant treatments patterns)	
Methodology: Prospective, open non-comparative post-marketing study	
Number of patients: Planned: 250 Randomized: NA Treated: 179 **Evaluated:** Efficacy: 155 Safety: 158	
Diagnosis and criteria for inclusion: Patients that were already treated with ramipril therapy for cardiovascular risk reduction or patients whom the doctor feels may benefit from treatment with ramipril.	
Study treatments **Investigational medicinal product:** Ramipril Formulation: Tablet (2.5 mg, 5 mg, and 10 mg) Route of administration: Oral	

Dose regimen: Dose titration should follow below schedule:

- Visit 1 (baseline): day of initial ramipril prescription at a dose of 2.5 mg/day
- Visit 2 (1 to 2 weeks after Visit 1): up-titration* to 5 mg
- Visit 3 (3 to 4 weeks after Visit 2): up-titration* to 10 mg
- Visit 4 (2 to 3 weeks after Visit 3): maintenance of a dose of 10 mg
- Visit 5 (2 to 3 weeks after Visit 4): final assessment

Duration of treatment: 8-12 weeks

Duration of observation: 8-12 weeks

Criteria for evaluation:

Efficacy:

Based on the qualitative questionnaire included in the Case Report Form (CRF), the tolerability of patients receiving study medication will be assessed by scoring system (Investigators assessment) with 5 parameters (Very good, Good, Sufficient, Insufficient and Not good).

The blood pressure reduction during clinical study period.

The investigator assessment on the overall treatment had not been defined in the protocol. The Guidance for investigator to assess on the overall treatment, were provided in a yes/no question in the Data Collection Form (DCF) for reaching BP goal and tolerability and then followed with the assessment for overall treatment in which they can give the score as defined in the protocol.

Safety: During the visits, any adverse drug reaction (clinical or biological) were collected and reported in study specific DCFs.

Statistical methods:

All patients recruited in the study were eligible for safety analyses as long as they received at least one dose of ramipril and had at least one post-treatment data.

All patients recruited in the study and had no major violation to the entry criteria were eligible for efficacy analyses as long as they received at least one dose of ramipril and had at least one post-treatment data.

Data were analyzed using the SPSS for Windows. All descriptive statistics were tabulated. Categorical data were summarized in contingency tables presenting frequencies and percentages. Continuous data were summarized using frequency (n), median (if n > 3), mean and standard deviation, minimal and maximal values.

Summary:

Population characteristics:

Table 1. Demographic and baseline characteristics of patient with high CV risks (N=158)

Age (years)	Mean (SD)	62.6 (6.22)
	Median	62.0
	Range	55 – 84
Gender	Male	83 (52.5 %)
	Female	75 (47.5 %)
Ethnicity	Indonesian	144 (91.1 %)
	Chinese	14 (8.9 %)
Weight (kg)	Mean (SD)	63.8 (11.15)
	Median	64.0
	Range	36 – 104
Height (cm)	Mean (SD)	160.1 (8.48)
	Median	160.0
	Range	138 – 180
BMI (kg/m^2)	Mean (SD)	24.9 (4.00)
	Median	24.2
	Range	16.7 – 40.8
BMI	< 23 (normal)	49 (31.0 %)
	23 – 26 (overweight)	63 (39.9 %)
	> 26 (obese)	45 (28.5 %)
	Missing	1 (0.06 %)
Blood pressure		
Systolic (mm Hg)	Mean (SD)	148.5 (24.38)
	Median	150.0
	Range	100 – 220
Diastolic (mm Hg)	Mean (SD)	89.2 (11.88)
	Median	90.0
	Range	60 – 120
Heart rate (bpm)	Mean (SD)	82.5 (10.27)
	Median	83.0
	Range	55 – 12

Table 1. Demographic and baseline characteristics of patient with high CV risks (N=158)	
Ramipril treatment:	
Initial Prescription	146 (92.4%)
Currently taking	12 (7.6%)
- 2.5 mg	9 (5.7%)
- 5 mg	3 (1.9%)

Efficacy results:

Treatment with ramipril was assessed among the 155 patients with CV high risk factors, as follow:

- 24 patients (15.5%) were scored Very good
- 79 patients (50.9%) were scored Good
- 24 patients (15.5%) were scored Sufficient
- 9 patients (5.8%) were scored Insufficient
- 1 patient (0.6%) were scored Not good
- 18 patients (11.6%) were missing for this scoring system

Treatment with ramipril was assessed as sufficient or more in 127 patients (81.9%) while 18 patients (11.6%) were missing for this scoring system.

At visit 3, 126 patients were managed to be up titrated until 10 mg and 8 patients were up titrated to 5mg while 24 patients were discontinued due to adverse events in 11 patients and 13 patients were dropped out because of patient's request (5 patients) and lost to follow up (8 patients). At the final visit, the total of patients who maintained their dosage at 10 mg was 113 patients and 1 patient was still on 5mg.

The mean reduction of SBP was 19.3 mmHg and mean reduction of DBP was 9.2 mmHg. A total of 95 (83.3%) patients from 114 patients who completed the study achieved their BP goal.

Safety results:

Table 2. Non Serious Adverse Drug Reaction during the study period (N=158)	
Cough	35 (22.2%)
Headache	6 (3.8%)
Dizziness	5 (3.2%)
Fatigue	4 (2.5%)
Nausea	10 (6.3%)
Dyspepsia	6 (3.8%)
Diarrhea	3 (1.9%)
Heart burn	2 (1.3%)
Palpitation	4 (2.5%)
Postural hypotension	3 (1.9%)
Chest pain	2 (1.3%)
Dyspnea	6 (3.8%)
Rash	2 (1.3%)
Other	8 (5.1%)

There were 3/158 deaths (1.9%) due to sudden death, sudden cardiac attack and ventricular tachycardia and 4/158 hospitalizations (2.5%) due to chest pain, infection on existence abscess, frequent left chest pain, and poly-palpitation during the study period. These 7/158 Serious Adverse Drug Reactions (4.4%) were considered by the investigators as not related to study drug

All reported non serious adverse drug reactions are known with ramipril treatment. The most frequent adverse drug reaction is cough as reported by 35/158 patients (22%).

There were 20/158 patients (12.6%) discontinued due to adverse event, 11/158 patients (6.9%) at visit 2 (3 patients with fatigue, 2 patients with headache, 1 patient each for cough, anorexia, diarrhea, poly-palpitation, chest pain and infection on abscess). 4/158 patients (2.5%) at visit 3 (2 patients with cough and 1 patient with left chest pain and 1 patient with ventricular tachycardia) and 5/158 patients (3.2%) at visit 4 (3 patients with cough, 1 patient with sudden death and 1 patient with sudden cardiac attack).

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