

# VALUE Trial

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## Methods

The Valsartan Antihypertensive Long-term Use Evaluation (VALUE) trial randomized 15,245 patients from 31 countries, aged 50 years or older with treated or untreated hypertension and high risk of cardiac events, to test the hypothesis that for the same blood pressure control, valsartan would reduce cardiac morbidity and mortality more than amlodipine.

Duration of treatment was event-driven and the double-blind, parallel-group trial lasted until at least 1,450 patients had reached a primary end point, defined as a composite of cardiac mortality and morbidity. Patients were followed for a mean of 4.2 years.

## Results

While blood pressure was reduced by both treatments, the effects of the amlodipine-based regimen were more pronounced, especially early in the trial (blood pressure 4.0/2.1 mmHg lower in amlodipine than valsartan group after one month; 1.5/1.3 mmHg after one year,  $p < 0.001$  between groups).

The primary composite end point occurred in 810 patients in the valsartan group and 789 in the amlodipine group (10.6% and 10.4%, respectively; hazard ratio 1.04,  $p=0.49$ ).


While the main outcome of cardiac disease did not differ between the treatment groups, the findings emphasize the importance of prompt blood pressure control in hypertensive patients at high cardiovascular risk.

### Dr. Lin's comments

Just over half a century ago, we didn't even treat hypertension. Now, we have the VALUE trial investigating if one treatment strategy is better than another for our high-risk patients.

In this trial, the primary end points were the same with both regimens. Therefore, the first teaching message is that it is important to reduce blood pressure. The number is very important, but interestingly, while the primary end point was the same for both groups, the blood pressure control was in favour of the amlodipine regimen. This may cause one to speculate there might be benefits beyond blood pressure, therefore, this debate is sure to rage on for years to come. Nevertheless, VALUE has confirmed the need to control blood pressure and the importance of doing that in a relatively short amount of time.

Another interesting learning point from VALUE was that there were less cases of new onset diabetes in the valsartan group. There was an absolute reduction of 3.3%, which translates into a number needed to treat of 30. This phenomenon has been seen in other angiotensin-converting enzyme inhibitor trials and angiotensin receptor blocker trials, but many times this finding was downplayed because the comparator agent was a diuretic or beta blocker, which may increase the rate of diabetes. The comparator in VALUE was a calcium channel blocker, which is not known to exacerbate diabetes and, therefore, is considered neutral. This result leads one to speculate that the delay, or even the prevention, of Type 2 diabetes may be within reach. Several ongoing clinical trials will definitively answer this question.

As family doctors, I think we should learn from VALUE that blood pressure control is paramount and that there might be hope for affecting the course of diabetes with certain classes of medication. 

#### About the author...

Dr. Lin is the medical director, University of Toronto Health and Wellness Centre at Scarborough, Scarborough, Ontario.