The Price of Mortality by Emily Yu, PharmD student; reviewed by Trudy Huyghebaert February 11, 2020

<table>
<tr><th></th><th colspan="2">HbA1C (1,2)</th><th>Blood Pressure(3–8)*
(clinic or home)</th><th>LDL-C(9–11)**</th><th>Smoking(12–14)</th></tr>
<tr><th></th><th>People with Diabetes</th><th>People without Diabetes</th><th></th><th></th><th></th></tr>
<tr><td>All Cause Mortality</td><td>Ideal: 6.0-8.0%<table><tr><th>A1C</th><th>Risk compared to A1C < 7.0%</th></tr><tr><td>8.0-9.0%</td><td>↑14%</td></tr><tr><td>> 9.0%</td><td>↑ 38% (heterogeneous)</td></tr></table></td><td>Ideal: 5.0-6.0%<table><tr><th>A1C</th><th>Risk compared to A1C < 5.5%</th></tr><tr><td>5.5-6.5%</td><td>↑13% (heterogeneous)</td></tr><tr><td>> 6.5%</td><td>↑48%</td></tr></table></td><td>Not significant.

Potential ↑ 58% risk per ↑ 14 mmHg for <u>ambulatory</u> SBP measurements
Ref: Aung</td><td>Not significant</td><td>↑~40% overall risk with ever smoking

Risk increases depending on years smoked and number of cigarettes smoked per day</td></tr>
<tr><td>Cardiovascular events</td><td><table><tr><th>A1C</th><th>Risk compared to A1C < 7.0%</th></tr><tr><td>> 7.0%</td><td>↑ 85% (heterogeneous)</td></tr></table><table><tr><th>A1C</th><th>Risk of CV events compared to A1C < 7.0%</th></tr><tr><td>> 7.0%</td><td>↑ 13% (heterogeneous)</td></tr></table></td><td><table><tr><th>A1C</th><th>Risk compared to A1C 5.0-6.0%</th></tr><tr><td>< 5.0%</td><td>↑ 13%</td></tr><tr><td>6.0-6.5%</td><td>↑ 22% (heterogeneous)</td></tr><tr><td>> 6.5%</td><td>↑ 113%</td></tr></table><table><tr><th>A1C</th><th>Risk compared to A1C 5.0-6.0%</th></tr><tr><td>< 5.0%</td><td>↑ 16%</td></tr><tr><td>6.0-6.5%</td><td>↑ 20%</td></tr></table></td><td>~ ↑ 15% risk per 5/3 mmHg over target

↑ 20 mmHg SBP or 10 mmHg DBP <u>doubles</u> the risk of cardiovascular disease in pts 40-70 y.o., consistent in BP range 115/75 to 185/115 mmHg</td><td>↓ ~20% risk per ↓ 1 mmol/L LDL-C (with a <u>statin</u>)</td><td>↑ 50% risk with smoking 1 cigarette per day

↓ 40% risk within 5 years of smoking cessation. Return to baseline risk of non-smoker after 10-15 years of smoking cessation.</td></tr>
<tr><td>Stroke</td><td colspan="2">(First stroke - ischemic only)
↑ 17% risk per 1% A1C increase<table><tr><th>A1C</th><th>Risk compared to < 5.7%</th></tr><tr><td>5.7-6.5%</td><td>NS</td></tr><tr><td>≥ 6.5%</td><td>↑ 115%</td></tr></table></td><td>~ ↑ 20% risk per 5/3 mmHg over target if baseline risk of stroke < 5.4% (NS in higher risk population)

↓ 5 mmHg DBP or ↓ 10 mmHg SBP associated with ↓ 30-40% risk of stroke, strongly influenced by age with greatest benefit < 60 y.o.</td><td>↓ 15% risk per ↓ 1 mmol/L LDL-C (with a <u>statin</u>)</td><td>↑ 25% risk with smoking 1 cigarette per day</td></tr>
</table>

*Available evidence does not support targeting lower than 140/90 mmHg, including in people with diabetes or cardiovascular disease. There is insufficient evidence to suggest a lower or higher than 140/90 mmHg in older adults (4,15,16)

**primary prevention only

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