Appendix C  ACE-Inhibitors (ACE-I)

Rationale
• ACE-Is slow disease progression, improve exercise capacity and decrease hospitalization and mortality.

Beneficial Subsets
• All patients with HF (NYHA I-IV)

Contraindications
• If baseline kidney function impaired (eGFR <30 ml/min) do not start ACE-I
  ➤ start hydralazine/nitrate combination and consult a nephrologist

Considerations
• ACE-I may cause a deterioration in kidney function and hyperkalemia, so careful monitoring is required during titration phase
• In most situations these drugs can be used successfully with dosage adjustments of concomitant medications

Monitoring
• Check Cr and K⁺ before initiating therapy and 1-2 weeks after each dose adjustment (sooner for the elderly)
• On stable therapy check Cr and K⁺ every 3-6 months

Dealing with Side-Effects
• In most situations these drugs can be used successfully with dosage adjustments of concomitant medications (i.e. diuretics, ARBs)
• If Cr increases > 30% from baseline:
  ➤ First reduce/hold diuretic for 1-2 days; if no response then reduce/stop ACE-I and consider hydrolyzing/nitrate combination
  ➤ When there is uncertainty about the underlying cause of kidney impairment or management thereof, referral to a nephrologist is encouraged.
• Intractable cough or drug-associated rash:
  ➤ First ensure that cough is not due to poorly controlled HF
  ➤ Stop ACE-I, consider ARB or hydrolyzing/nitrate combination if ARB not tolerated
• Angioedema may occur with ACE-I (may recur with ARB therapy)

<table>
<thead>
<tr>
<th>STARTING DOSE</th>
<th>TRIAL DOSE*</th>
<th>MAXIMUM DOSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ramipril (Altace®) or LCA</td>
<td>1.25 mg BID</td>
<td>5 mg BID</td>
</tr>
<tr>
<td>Enalapril (Vasotec®)</td>
<td>2.5 mg BID</td>
<td>10 mg BID</td>
</tr>
<tr>
<td>Captopril (Capoten®) or LCA</td>
<td>6.25 mg TID</td>
<td>50 mg TID</td>
</tr>
<tr>
<td>Lisinopril (Prinivil®, Zestril®)</td>
<td>2.5 mg daily</td>
<td>35 mg daily</td>
</tr>
<tr>
<td>Trandolapril (Mavik®),</td>
<td>1 mg daily</td>
<td>4 mg daily</td>
</tr>
<tr>
<td>Perindopril (Coversyl®)</td>
<td>2 mg daily</td>
<td>8 mg daily</td>
</tr>
</tbody>
</table>

* Target dose used in large CHF trials with clinical endpoints

Quinapril (or LCA), cilazapril (or LCA), fosinopril, and benazepril are available but have not been used in clinical trials, and thus their use cannot be endorsed.