Translating Complex Genetic Information into Better Patient Outcomes
Type 2 diabetes – type 3, 4 & 5

- Joel Dudley Mount Sinai Hospital
- obesity, high blood sugar, kidney disease, and eye disease, were limited to subtype 1, whereas other comorbidities such as cancer and neurological diseases were specific to subtypes 2 and 3
Genes Determine Drug Effects
# Issues

<table>
<thead>
<tr>
<th>Adverse Drug Events</th>
<th>Ineffective Drugs</th>
<th>Genetic Variations</th>
<th>Medication Selection</th>
</tr>
</thead>
<tbody>
<tr>
<td>4th leading cause of death</td>
<td>60% of prescribed drugs do NOT benefit the individual</td>
<td>97% of the population has at least 1 actionable genotype</td>
<td>Genetics is only 1 element of the complex drug selection process</td>
</tr>
</tbody>
</table>
Medication Selection Processes

The less time in the consultation the more inappropriate the prescription

- I only have one minute
- Laboratory results
- Biophysical results
- Patients wishes
- Current medications
- Patients age
- Patients sex
- Potential Medications
- Potential harms
- Effect of interventions
- Harm of interventions
- Patients sex
Current Support System for Prescribing

The Gotu – Q&A & Treatment Options


What are the stages and diagnostic criteria for gout?

- "Pseudogout," a form of osteoarthritis, can mimic gout.
- "Critical gout" describes disease with prolonged symptoms.
- "Intermittent gout" may develop over time.
- "Crystal synovitis" includes joint pain, swelling, tenderness.
- "Toxic synovitis" includes acute pain, fever.

What is the concern of diuretics with gout?

- Loop, thiazide, thiazide diuretics: excretion of uric acid from the body

What are the primary drug treatment options for gout?

- NSAIDs: 1. Acetaminophen (paracetamol) 2. Ibuprofen 3. Aspirin
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<tbody>
<tr>
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<tr>
<td>1022</td>
</tr>
<tr>
<td>Essex Gold</td>
</tr>
<tr>
<td>Essex Chrome</td>
</tr>
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</table>
BC choice in genomics

1. Is BC going to profit from this revolution by investing in biotech?
2. Or are we going to pay other provinces for it?