NATIONAL COLORECTAL CANCER SCREENING PROGRAMME IN SLOVENIA

The Svit Program

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Colorectal Cancer Burden in 2008
Source: Cancer Registry of Republic of Slovenia, 2011, Institute of Oncology Ljubljana

• 1,450 new cases (ICD C18-C20):
  • crude incidence rate 71.6 / 100,000

• 4th most common cancer in men (12.8%)

• 3rd most common cancer in women (11.0%)

• 2nd most common cause of cancer death: 758 deaths

• Very low percentage of colorectal cancer detected at an early stage:
  • colon 12.8% of cases
  • rectum 13.7% of cases
The Survival Rates of Colorectal Cancer Patients

<table>
<thead>
<tr>
<th>Stage of colorectal cancer</th>
<th>Colon</th>
<th>Rectum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage I,II</td>
<td>95%</td>
<td>90%</td>
</tr>
<tr>
<td>Stage III</td>
<td>72%</td>
<td>60%</td>
</tr>
<tr>
<td>Stage IV</td>
<td>8%</td>
<td>8%</td>
</tr>
<tr>
<td>All stages</td>
<td>58%</td>
<td>52%</td>
</tr>
</tbody>
</table>

- The 5-year relative survival rate of colorectal cancer patients is increasing thanks to improved treatment
- The cancer stage on diagnosis remains unchanged
- The mortality rate in colorectal cancer patients remains high compared to the European average

The Svit Program
- A nationally organized, centrally managed, population-based CRC screening programme;
- Based on scientific evidence, quality standards and best practice experience;
- Adapted to local needs and capacities;
- Target population covered: 540,000 men and women aged between 50 and 69 with basic Health Insurance, invited every two years;
- Based on
  - the immunochemical FOBT test with automatic readings
  - a screening colonoscopy for all FOBT positive cases
- Legally based, financially and professionally supported.
The Objectives of the Svit Program

• To reduce CRC patient mortality rate by 25 - 30%: 200 lives saved each year

• To reduce CRC incidence by 20%: 300 fewer colorectal cancer cases per year

• To increase the proportion of CRCs detected early from 14% to more than 50% in 10 years

• To improve the quality of CRC patients life

• To reduce the financial burden of CRC treatment

Svit Program Institutions and Executants

• The Ministry of Health of the Republic of Slovenia
• The Health Insurance Institute of Slovenia
• Svit program operator: National Institute of Public Health of the Republic of Slovenia
• Program council
• Executants:
  – The Svit centre (Central laboratory, post terminal, call centre)
  – general practitioners
  – 56 authorized colonoscopists in 23 colonoscopy centres
  – 14 authorized pathohistologists in 4 pathohistology centres
• Health education centres, Institutes of health protection, NGOs
• Pharmacies
• Media
• Patients who have already participated in the program
The Svit Program is Designed as a User-Friendly

- Personal invitations, reminders and information about all the procedures are provided to all participants; the process is user-centered
- There are short waiting times for all procedures
- A special emphasis on communication (a personal counseling call centre)
- Monitoring responses; sending re-invitations and reminders, personal conversations, strategies for encouragement
- Accessibility
- The program is free for all participants
- A user-friendly colon cleansing procedure prior to colonoscopy (Moviprep)
- People with special needs: special attention

The Svit Program - National Implementation

Method of inviting population:
- In an odd-numbered year, we invite population born in an odd year (e.g. in year 2009 we invited people born 1941, 1943, ...)
- In an even-numbered year, we invite population born in an even year (e.g. in 2010 we invited people born 1942, 1944, ...)

The first round of screening is completed (2009 – 2010):
17.04.2009 – 31.03.2011

The second round of screening (2011 – 2012):
Target population invited to participate in the Svit Program

Written statement of participation

FOBT kit (two samples) sent by mail

No response

Written reminder 1 and 2

The participant returns the FOBT kit to the Central laboratory by mail

Test results

Positive

Colonoscopy

Negative

The participant receives invitation for screening after 2 years

Patients Excluded from the Svit Program

1) Patients already involved in diagnostic or therapeutic colorectal cancer treatment.

2) Patients diagnosed with ulcerative colitis or Chron’s disease.

3) Patients who previously had adenomas removed at colonoscopy.

4) Patients who have had a colonoscopy at any time in the past 3 years, providing that the results were normal. They will be invited to participate in the Svit Program again after two years.

The statement should be returned in each case!
Stool Analysis Results

If the FOBT is **NEGATIVE**
- The results are sent to the participants within 5 days, general practitioner receives a list of tested patients once a year.
- The person will be invited into the program again after 2 years.

If the FOBT is **POSITIVE**
- The results are sent to the participant’s general practitioner on the day of the analysis and to the participant a day later.
- Additional testing is needed – colonoscopy.

If the FOBT kit is not returned within 1 or 2 months of the invitation, a reminder is sent!

If the FOBT is Positive

The patient visits the general practitioner within 14 days after the FOBT analysis. The physician assesses whether the patient’s health is appropriate for a colonoscopy, gives advice on how to prepare for the colonoscopy, fills out a referral form for a screening colonoscopy, signs a prescription for Moviprep and answers the patient’s questions.

The patient (or a physician or a nurse) calls the Svit call centre, where an appointment is arranged for a colonoscopy in one of the authorized colonoscopy centres. **The colonoscopy date is within a month.**

The patient gets free Moviprep medicine from the pharmacy for bowel preparation. **Preparation for the colonoscopy at home.**
Care for Quality

- Entering data into the unified information system: central unit, colonoscopists, pathohistologists
- Unified education for colonoscopists and pathohistologists
  - supervision for one to two years
- Anonymous post-colonoscopy questionnaire on patient experience
- The active role of the general practitioners:
  - unified preparation of patients with a positive FOBT for the colonoscopy
  - feedback on the patients’ participation in the program
  - the active involvement of non-responders in the program
- A network of info points in all health care centers
- Community nursing staff support the active involvement of non-responders

Response to Invitations Sent in the First Round
(period from 17.4.2009 to 31.3.2011)

<table>
<thead>
<tr>
<th>Category</th>
<th>Quantity</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Invitation sent</td>
<td>536,636</td>
<td>95.43%</td>
</tr>
<tr>
<td>Invitation received</td>
<td>532,954</td>
<td>99.31%</td>
</tr>
<tr>
<td>Signed statement of participation in the program</td>
<td>300,659</td>
<td>56.41%</td>
</tr>
<tr>
<td>Exclusion criteria</td>
<td>36,361</td>
<td>12.09%</td>
</tr>
<tr>
<td>Participation refused</td>
<td>1,361</td>
<td>0.26%</td>
</tr>
<tr>
<td>FOBT kits for collecting stool samples sent</td>
<td>263,683</td>
<td>87.97%</td>
</tr>
<tr>
<td>Screened</td>
<td>245,107</td>
<td>49.36%</td>
</tr>
<tr>
<td>- adequately tested</td>
<td>243,028</td>
<td>92.17%</td>
</tr>
<tr>
<td>- positive FOBT</td>
<td>15,113</td>
<td>6.22%</td>
</tr>
<tr>
<td>- negative FOBT</td>
<td>227,915</td>
<td>93.78%</td>
</tr>
<tr>
<td>- inadequate FOBT</td>
<td>2,079</td>
<td>0.85%</td>
</tr>
</tbody>
</table>

(a) Proportion of adequately tested among sent kits for collection of stool samples.
(b) Proportion of adequately tested among screened.
Response Rates in the Svit Program within Slovenian Health Regions, Comparison by Periods

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Celje</td>
<td>53.04%</td>
<td>62.43%</td>
<td>63.22%</td>
<td>52.81%</td>
</tr>
<tr>
<td>Koper</td>
<td>49.99%</td>
<td>62.79%</td>
<td>61.40%</td>
<td>48.08%</td>
</tr>
<tr>
<td>Kranj</td>
<td>57.84%</td>
<td>68.51%</td>
<td>67.44%</td>
<td>54.56%</td>
</tr>
<tr>
<td>Ljubljana</td>
<td>57.29%</td>
<td>66.91%</td>
<td>67.60%</td>
<td>54.04%</td>
</tr>
<tr>
<td>Maribor</td>
<td>47.97%</td>
<td>60.48%</td>
<td>66.27%</td>
<td>50.10%</td>
</tr>
<tr>
<td>Murska Sobota</td>
<td>47.44%</td>
<td>57.39%</td>
<td>63.57%</td>
<td>47.93%</td>
</tr>
<tr>
<td>Nova Gorica</td>
<td>57.28%</td>
<td>69.36%</td>
<td>66.65%</td>
<td>53.03%</td>
</tr>
<tr>
<td>Novo mesto</td>
<td>57.26%</td>
<td>68.05%</td>
<td>65.33%</td>
<td>55.49%</td>
</tr>
<tr>
<td>Ravne na Koroškem</td>
<td>55.08%</td>
<td>64.61%</td>
<td>67.59%</td>
<td>52.42%</td>
</tr>
<tr>
<td>SLOVENIA</td>
<td>53.93%</td>
<td>64.58%</td>
<td>65.79%</td>
<td>52.40%</td>
</tr>
</tbody>
</table>

The response rate to the first invitation in 2009 was 36.03%.
The response rate to the first invitation in 2010 was 56.99%.
The response rate to the first invitation in 2011 was 58.30%.

Colonoscopies Performed in the First Round (period from 17.4.2009 to 31.3.2011)

<table>
<thead>
<tr>
<th>Colonoscopy procedures</th>
<th>Men</th>
<th>Women</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Screening</td>
<td>4,182</td>
<td>4,292</td>
<td>8,474 (60.84%)</td>
</tr>
<tr>
<td>Therapeutic*</td>
<td>3,445</td>
<td>1,701</td>
<td>5,146 (36.95%)</td>
</tr>
<tr>
<td>Incomplete</td>
<td>137</td>
<td>171</td>
<td>308 (2.21%)</td>
</tr>
<tr>
<td>Total</td>
<td>7,764</td>
<td>6,164</td>
<td>13,928</td>
</tr>
</tbody>
</table>

*lesion ≥ 10 mm
The Svit Program Findings – First Round

The (worst) pathological findings in patients who had colonoscopy:

- carcinoma 726 5.3%
- suspicious for carcinoma 57 0.7%
- advanced adenoma 5145 37.8%
- non-advanced adenoma 1563 11.5%
- non-neoplastic polyp 765 5.6%
- other non-neoplastic 533 3.9%
- unknown 95 0.7%
- no histology 4724 34.7%

Pathological Findings by Age
Pathological Findings by Sex

Detected Cancers Stages

<table>
<thead>
<tr>
<th>TNM stage</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>163</td>
<td>33.50%</td>
</tr>
<tr>
<td>I*</td>
<td>82</td>
<td>16.80%</td>
</tr>
<tr>
<td>II</td>
<td>103</td>
<td>21.10%</td>
</tr>
<tr>
<td>III-IV</td>
<td>139</td>
<td>28.50%</td>
</tr>
<tr>
<td>Total</td>
<td>487</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

- Stage I: T1 or T2, N0, M0
- Stage I*: T1 NX (no surgery)
- Stage II: T3 or T4, N0, M0
- Stage III IV: lymph node involvement or distant metastases