Costs of Post-Treatment Surveillance for Patients with Cutaneous Melanoma

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Incidence

Industrialized Countries

- European Union – 49,765*
- United States – 59,940 (2007 estimate)
- Japan – 785*
- Australia – 8,645*
- Total – 119,135

*Int'l Agency for Research on Cancer, GLOBOCAN 2002 data

Other Considerations

- An individual born in 2000 has a 1 in 90 lifetime chance of developing melanoma
- Incidence rates are doubling every 13 years in the U.S. and at similar rapid rates for many other industrialized countries
- Melanoma is projected to become the most common human malignancy within the current century

Curative Treatment, Recurrence, Re-resection, & Survival Rates

- 90% (107,222) of all new cases will undergo curative intent treatment and potentially enter follow-up
- 25% (26,806) will develop recurrence within 5-10 years
- 20% (5,361) will successfully undergo re-resection
- Of the 107,222 in follow-up, only 5 percent are likely to experience any real survival benefit

Follow-Up Definition

- Begins after completion of BOTH
  1) Curative Intent Treatment (Surgery)
  2) All Adjuvant Therapy
- Long-term in nature
- Generally involves office visits plus some combination of diagnostic tests

Reasons Given For Conducting Follow-Up

- Promotes early detection of recurrence
- Promotes early detection and curative treatment of recurrence among select patients and measurably lengthens survival

Reasons Given For Conducting Follow-Up (cont'd)

- Promotes early detection and curative treatment of new melanoma primaries and measurably lengthens survival
- Promotes early detection and curative treatment of new primaries of other organ sites for select patients and measurably lengthens survival

Reasons Given For Conducting Follow-Up (cont'd)

- Improves patient's quality of life
- Promotes patient education and risk counseling
- Promotes the provision of psychological support

Reasons Given For Conducting Follow-Up (cont'd)

- Prevents damage to rapport with referring physicians
- Prevents damage to rapport with patients
- Avoids increasing medical malpractice risk

Literature Review

- Medline search of the literature for the 18-year period 1989-2006
- Search of major textbooks
- Search of reference lists of all relevant articles and book chapters

Nationwide Charge Data Sources

- 2004 Part B Medicare Extract & Summary System Data File
- Inflated to 2006 charges using the Medical Care component of the Consumer Price Index (all urban consumers, U.S. city average)
- Discounted at 3 and 5 percent

Modality Used In 115 Identified Follow-Up Strategies

	Median for 5-year follow-up
• Office visit	14

Variation According to Initial TNM Stage

Stage	Mean ($)	Range ($)
I (one outlier excluded)	1,907	717-4,569
II	1,962	977-3,003
III	2,396	902-4,414

Variation According to Initial Breslow Thickness

Depth (mm)	Mean ($)	Range ($)
≤ 0.75	410	0 - 844
> 0.75	1,470	564 - 2,255

Variation According to Initial Breslow Thickness

Depth (mm)	Mean ($)	Range ($)
≤ 1.50	1,740	902-2,990
1.51-3.00	2,438	1,578-3,832
> 3.00	2,592	1,158-3,720

Five-Year Follow-Up Charges Per Patient
(in Year 2006 U.S. $)

- Melanoma = $122 -- $4,951 (excluding the no follow-up strategy)
- Colorectal Cancer = $1,618 -- $47,465
- Prostate Cancer = $1,449 -- $13,684
- Lung Cancer = $2,724 -- $16,247

Five-Year Follow-Up Charges Per Annual Patient Cohort
(in millions, Year 2006 U.S. $)

- European Union = $5.5 --$221.8
- United States = $6.6 -- $267.1
- Japan = $.09 ($86,254) -- $3.5
- Australia = $.9 -- $38.5
- Total = $13.1 -- $530.9

Five-Year Follow-Up Charge Per Detected Recurrence
In Year 2006 U.S. $

$488 -- $19,804

Cost Estimate Assumptions

- Five-year survival
- No increase in charges
- No additional work-up or treatment required
- No indirect costs

Why Follow Patients After Curative Treatment?

- If few patients experience survival benefit
- If follow-up is so expensive
- If no single follow-up strategy has been identified as optimal

What Viable Options Are Available?

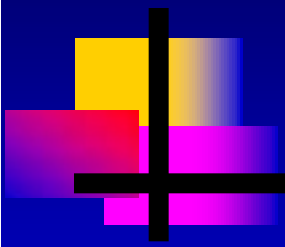
- No follow-up
- Minimal follow-up (office visits & chest x-ray only)
- Intensive follow-up (primarily patient education)

What Viable Options Are Available? (Cont'd)

- Follow-up of selected subgroups only
- Stage-specific follow-up

The Future

- Need tests to identify patients most likely to recur
  - New tumor markers
  - Genetic testing
  - Pet scans



Questions?