Dr Van Schil: Did you also look at survival in those patients? Your conclusion is that those patients should not be operated upon, but is that a valid conclusion from the study you performed?

Dr Menon: As I say, we still should proceed to operate on these patients. That’s why I said that if these nodes come back as positive, they should undergo metastasectomy as well as chemoradiation, because it has been shown in previous studies that metastasectomy improves survival in positive or negative nodes, but these patients should be subjected to chemoradiation as well.

Dr Van Schil: And regarding those patients who did not have a mediastinoscopy before the operation, were there any cases of N2 or N3 involvement that you detected during thoracotomy?

Dr Menon: No, we didn’t actually look at that.

Dr B. Witte (Koblenz, Germany): In the patients who were node-negative at videomediastinoscopy, you obviously did proceed to an open operation. Did you reassess the mediastinum by lymphadenectomy and did you find any overlooked positive nodes in them? To put it short, what was the false-negative rate of video-mediastinoscopy?

Dr Menon: No, we did the video-mediastinoscopy before we proceeded to the pulmonary metastasectomy, and we didn’t assess the other nodes at that time, so we didn’t do a mediastinal lymph node sampling during the time of thoracotomy.

Dr Witte: Oh, so it’s not about accuracy data. I see.

Dr M. Zielinski (Zakopane, Poland): I have some concerns about your algorithm. I think that we should treat these patients in a very individual way. For example, if there is a single metastasis in the lung, in one lung, and during mediastinoscopy you find only one metastasis in one node, why not proceed to thoracotomy? Maybe you should perform metastasectomy, exploration of the lung, and lymphadenectomy and it might be a better solution than to refer the patient to chemoradiation in that case. So I think I would advise you to be more flexible in your qualifications.

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**Editorial comment**

**Surgical resection of pulmonary metastases**

Surgical resection of pulmonary metastases is now common place and is a routine part of thoracic surgical practice. It represents an increasing component of the work load of many surgeons and is the subject of an ongoing working group of the European Society of Thoracic Surgeons (ESTS). In this issue of the European Journal of Cardiothoracic Surgery, Menon and colleagues from Leeds, UK [1] make an important contribution to this subject in two ways:

1. They add to our knowledge on the frequency with which pulmonary metastases themselves metastasise to the mediastinal lymph nodes.
2. They engage us in a better-informed consideration of the objectives of metastasectomy.

Whenever we operate on a patient, we should think very clearly about the precise objectives. The gain we expect should be clear in our own minds and made explicit to the patient. If the patient is blind due to cataract the objective of surgery is clear: patients expect to be able to see. Relief of symptoms is a common indicator that the operation can eradicate all disease. This is clear and explicit.

Metastasectomy is not performed with the primary objective of relieving specific symptoms. Indeed a patient with symptoms attributable to metastases is likely to be excluded. It is perhaps reasonable therefore that reports of series of metastases do not offer a change in symptoms as a beneficial measure of outcome but none of the series report any measure of the overall well being of the patient. I am very happy to be corrected if I have overlooked some significant work but in the course of a systematic review we have yet to find quality of life reporting in the evaluation of the outcomes of metastasectomy. Worse still, for an operation, which involves thoracotomy and loss of at least some lung parenchyma, the detrimental effect in terms of breathing is generally not reported. Rolle who is a major contributor in this field [2] does provide FEV1 in his WMCTS seminar on the topic [3].

The only sense in which symptomatic relief is given primary consideration is that some claim psychological benefit to the patient having metastases removed. Again I have yet to see any semblance of psychological assessment, any reported measures of anxiety and depression before and after, or anything else resembling scientific support for this tenet. Aberg has also challenged this years ago [4,5]. If we are doing operations for psychological reasons we should evaluate our results. Are psychologists even authors on metastasectomy papers? Again, I would welcome correction on this point with reference to the scientific reporting. If the perception of psychological benefit is based on a false assumption of cancer cure on the part of the patient, that belief should be dispelled or what is the meaning of informed consent?

Let us leave symptoms aside; the reporting of metastasectomy places all its emphasis on cure by eradication of residual cancer. It is all to do with survival. Data are presented in terms of Kaplan–Meier plots and summarised as median time to death. The emphasis is on R0 versus R1 resections, better survival with single or few metastases, and other indicators that the operation can eradicate all disease. This is the rhetoric of surgical cure. If the operation is being performed to improve expectation of life we should be able to estimate, for a group of patients similar to the one under consideration, the likely survival without surgery to set it against the improved expectation of life if we do operate. If there is any beneficial difference then we should estimate the risks entailed, which must be proportionate to the likely gain.

It is debatable whether it is useful to group metastases from various cancer types in the same report. There may be particular considerations in thyroid, kidney, bony sarcomas and germ cell tumours. On the other hand metastasectomy is not a common practice for the two most common cancers, i.e. breast and lung. In the case of breast it is because that cancer is generally regarded as potentially disseminated from the outset and the place of surgery is limited to local control and staging. I will not waste space setting out for thoracic surgeons why most of us do not reoperate to remove...
lungs cancer secondaries in the lung; on this matter many have more knowledge and experience than I. My point is that if all cancers are grouped in reports we get what I call ‘partridge in a pear tree’ papers after the popular Christmas song the Twelve Days of Christmas (Table 1). When you have all those people — Lords and Ladies, maids, drummers and pipers (N = 50 out of a total of 78) — will one, two or three assorted small birds add or detract from the message? Surgeons are reluctant to leave these out.

When we operate our objectives should be clear in our own minds and conveyed honestly and sympathetically to the patient. Are they clear in the case of metastasectomy? I handle many referrals from other teams and I listen carefully to the patients they send. Too often there is a lack of clarity on the part of the patients about exactly what we might be able to achieve; we should not blame the patients and for the colorectal teams (the main referral source) this is excusable. The guidance for the management of colorectal cancer suggests that these patients should be sent to the lung cancer multidisciplinary team for consideration of surgical removal, which may result in cure.1 There is a single citation in the guideline from more than 10 years ago which contains no data on pulmonary metastases [6]. A recent exhaustive review on hepatic secondaries from colorectal cancer discovered not one RCT and made no attempt at any form of quantitative analysis [7]. I will not pre-empt the findings of the ESTS Working Group or our own systematic review but it will come as no surprise if the story is much the same. There is good evidence that patients with fewer metastases, longer intervals before they appear, lower carcinoma embryonic antigen (CEA) and less aggressive primaries do better than the average case but whether comparing like for like we add years to life remains uncertain [8]. When we operate our objectives should be clear in our own minds and conveyed honestly and sympathetically to the patient. Are they clear in the case of metastasectomy? I handle many referrals from other teams and I listen carefully to the patients they send. Too often there is a lack of clarity on the part of the patients about exactly what we might be able to achieve; we should not blame the patients and for the colorectal teams (the main referral source) this is excusable. The guidance for the management of colorectal cancer suggests that these patients should be sent to the lung cancer multidisciplinary team for consideration of surgical removal, which may result in cure.1 There is a single citation in the guideline from more than 10 years ago which contains no data on pulmonary metastases [6]. A recent exhaustive review on hepatic secondaries from colorectal cancer discovered not one RCT and made no attempt at any form of quantitative analysis [7]. I will not pre-empt the findings of the ESTS Working Group or our own systematic review but it will come as no surprise if the story is much the same. There is good evidence that patients with fewer metastases, longer intervals before they appear, lower carcinoma embryonic antigen (CEA) and less aggressive primaries do better than the average case but whether comparing like for like we add years to life remains unanswered. Is it the effect of surgery or selection? We are working up a trial to randomise ‘in the zone of uncertainty’ the outline of which is published in the BMJ [8].

If the benefit we offer is that we cure some and that these are the only ones who benefit (we only harm the others) then we should pay great attention to ensuring that we do not operate on patients in whom we will leave behind disease we cannot reach. At present there may be 10% of patients who could be spared this unavailing lung resection if we were to stage the mediastinum (Table 2). Thanks to the work of the

References


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Table 1

| On the twelfth day of Christmas, my true love sent to me |
| Two turtle doves, |
| Three French hens, |
| Four calling birds, |
| Five golden rings, |
| Six geese a-laying, |
| Seven swans a-swimming, |
| Eight maids a-milking, |
| Nine ladies dancing, |
| Ten lords a-leaping, |
| Twelve drummers drumming, |

The twelve days of Christmas

<p>| Table 2 |
| Collected data on the rate of mediastinal positive nodes from four publications |</p>
<table>
<thead>
<tr>
<th>Cases</th>
<th>Mts</th>
<th>Percent</th>
<th>95% CL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loeh et al. [9]</td>
<td>63</td>
<td>9</td>
<td>14</td>
</tr>
<tr>
<td>Ercan et al. [10]</td>
<td>883</td>
<td>70</td>
<td>8</td>
</tr>
<tr>
<td>Menon et al. [1]</td>
<td>57</td>
<td>6</td>
<td>11</td>
</tr>
</tbody>
</table>

The data are in general agreement, with overlapping confidence limits so a round figure of 10% seems a fair summary. Percentages and their 95% CL are rounded for clarity.

UK’s NICE lung cancer guideline development group access to PET is now general in Britain (pace Menon) so some of these patients can be spared an operation that cannot help. Where we consider mediastinoscopy before lung cancer resection appropriate, would not the same apply to pulmonary metastasectomy as advocated by Menon.

http://www.nice.org.uk/guidance/CSGCC.