Table 2. Ultrasonographic Findings of 25 Well-Documented Patients With Cavitary Melanoma of the Uvea in English Literature

<table>
<thead>
<tr>
<th>Source</th>
<th>Solid Component Present</th>
<th>Loculation on USG</th>
<th>Echoes in Cavitation</th>
<th>Septa in Cavitation</th>
<th>% Mass Thickness Occupied by Cavity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kennedy5</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Reese6</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
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<tr>
<td>Zakka et al7</td>
<td>Unilocular</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+ + +</td>
</tr>
<tr>
<td>Stone and Shapiro4</td>
<td>Unilocular</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+ + +</td>
</tr>
<tr>
<td>Fledelius et al8</td>
<td>Unilocular</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Scott et al11</td>
<td>Multilocular</td>
<td>+</td>
<td>+</td>
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<tr>
<td>Lois et al2</td>
<td>Unilocular</td>
<td>–</td>
<td>–</td>
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<tr>
<td>Rebolleda et al1</td>
<td>Multilocular</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+ + +</td>
</tr>
<tr>
<td>Frazier Byrne and Green1</td>
<td>Multilocular</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+ + +</td>
</tr>
</tbody>
</table>

Abbreviations: NA, not available; USG, ultrasonography; −, absent; +, present.

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Arteriovenous Dissection in a Living Human Eye: Clinicopathologic Correlation

Although the visual results after arteriovenous dissection (AVD) seem encouraging,1,2 its effectiveness has not been proved in a controlled, prospective clinical trial. The role of surgical decompression itself remains unclear,3 and little is known about surgically induced nerve fiber defects. The goal of this study was to observe the effects of an AVD on unaffected human retinal tissue.

Report of a Case. We treated an 80-year-old woman with an advanced sebaceous carcinoma of her right upper eyelid. To achieve complete tumor removal, we had to exenterate the orbit. After receiving approval by our local ethics committee, we tried to perform an AVD before removing the eye.

After a standard vitrectomy, the internal limiting membrane was removed from its position over an arteriovenous crossing. The common adventitial sheath over the arteriovenous crossing was opened with a bent blade. We then tried to separate the overlying artery by using a blunt hook and a sharp blade. With these techniques, we could remove the artery from the vein except for the common juncture right at the crossing. The entire specimen was immersed for light microscopy.

Results of histological examination confirmed the diagnosis of a sebaceous carcinoma. In the surgically treated areas of the retina, the nerve fiber layer was remarkably damaged and the internal limiting membrane was absent (Figure 1). Deeper retinal layers were relaxed and edematous. The connection between the artery and vein was very...
tight at the arteriovenous crossing itself, where the vessels obviously could not be dissected (Figure 2). Serial sections showed that the distance across the adjoining vascular walls separating the lumina of the 2 vessels was as little as 4.48 µm.

Comment. In the present study, we tried to focus on the histological damage after AVD in a living human eye. The only histological results presented in the literature—by a single study—are of 6 enucleated human eyes from an eye bank. To date, the complication rate of AVD has been low, but little is known about nerve fiber layer damage.

Our histological findings have confirmed our assumption of a pronounced nerve fiber layer defect. We are concerned about this issue, as we would anticipate visual field defects. However, the effects of AVD on the visual field remain unknown and deserve investigation.

Furthermore, our study strengthens the clinical and histological correlations regarding the previously described tight connection of the crossing vessels by documenting these precisely in the living eye and providing histological correlation. We therefore tend to doubt reports of successful and simple separation with the technique described herein. Some groups reported the successful use of scissors. However, having the nerve fiber layer damage in mind, the use of scissors may lead to greater retinal damage compared with the use of blades.

Our experience leads us to maintain that it is not feasible to cut such thin tissue with a blade or scissors, although our results reflect the findings in only 1 eye. We recommend that future studies concentrate on whether successful vessel separation correlates to visual improvement.

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Cytomegalovirus Retinitis in an Immunocompetent Patient

Cytomegalovirus (CMV) retinitis is typically seen in immunocompromised patients. Groups at risk for CMV retinitis include patients with AIDS with a CD4 cell count less than 50/µL, kidney transplant patients undergoing long-term immunosuppres-