

Table 2. Incidence of Chromosomal Abnormalities in Lipomatous Neoplasms

| Type of Lipoma | Number of Abnormalities | Chromosomal Abnormality Present | Chromosomal Abnormality Absent | Chromosomal Aberration | Incidence (%) |
|----------------------------------------|-------------------------|---------------------------------|--------------------------------|-----------------------------|---------------|
| All lipomas | 178 | 149 | 29 | Varied | 84 |
| Subcutaneous and intramuscular lipomas | 93 | 74 | 19 | Aberrations in 12q, 6p, 13q | 80 |
| Atypical lipomas | 37* | 29* | 8 | Ring chromosomes | 78 |
| Myxoid liposarcomas | 27 | 26 | 1 | t(12;16) | 96 |
| Spindle cell and pleomorphic lipomas | 8 | 7 | 1 | Loss of 16q13 | 87 |
| Lipoblastomas | 3 | 3 | 0 | 8q11→13 | 100 |
| Hibernomas | 2 | 2 | 0 | 11q13, 10q22 | 100 |

Data from Fletcher et al.³¹

*Includes 5 dedifferentiated tumors.

to be conclusively established. Detection of LOH in chromosome band 11q13 in lipomas is consistent with these lesions being an integral feature of the MEN 1 phenotype and possibly also having a tumor suppressor gene pathogenesis. LOH has been observed in all patients studied who have lipomas; in those patients whose lipomas did not exhibit LOH, LOH involving the wild-type allele was seen in other lesions.

Because none of these studies has provided a final answer, the relationship between lipomas and MEN 1 remains a riddle. The possibility remains that the lesions could arise through a completely independent mechanism not involving the MEN 1 gene on chromosome band 11q13 and that their occurrence in patients with familial MEN 1 is purely coincidental. Further studies are necessary to solve the riddle once and for all. The new advances occurring in the world of genetics, especially the breakthroughs coming from the human genome project, may soon provide more answers. **HP**

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