MYC gene family amplification (Non-core)

Reason/Evidentiary Support

The c-Myc protein (MYC) has a fundamental role in cell proliferation, cell size, differentiation, stem cell self-renewal, and apoptosis. Its deregulation occurs in many cancers including a range of brain tumours. The MYC transcription factor family also includes its paralogues MYCN and MYCL.[1] *MYC*, *MYCN,* and *MYCL* amplifications are prognostically relevant in medulloblastomas.[2] *MYC* and *MYCN* gene amplification and fusions are seen in the SHH group, and non-WNT/non-SHH, but almost never in WNT-activated medulloblastomas.[2,3]

A commonly used laboratory method to detect MYC gene family amplifications is *in situ* hybridisation, either using FISH or CISH.[4] Other approaches include PCR-based methods such as real-time PCR, NGS, MLPA, or array technologies.[5,6,7]

References

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