



nature publishing group



► **COVER:** 'On the move' by Lara Crow, inspired by this month's Focus on Metastasis and migration.



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**M**etastases are the main cause of cancer-associated death and it seems surprising that there remain so many questions relating to the biology of metastasis. For example, how and why do metastases exhibit variations in tropism and latency? When are metastases seeded? What traits are required in tumour cells and the microenvironment to disseminate and seed a metastasis? How is one cell capable of so many sequential processes? And how might we predict and prevent or treat metastatic dissemination?

Many of these questions are receiving renewed attention as new data provide insights into the biology of a metastatic tumour. As discussed on [page 274](#) by Joan Massagué and colleagues, genetic profiling of the primary tumour could predict to which distant sites a tumour might metastasize. Moreover, the ability to leave the primary tumour bed and then grow another tumour indicates that stem cell properties and developmental pathways that have gone awry are likely to be important, as discussed by Kornelia Polyak and Robert Weinberg ([page 265](#)). Providing more pause for thought, on [page 302](#) Christoph Klein argues that metastases are seeded when the primary tumour is clinically undetectable, considerably earlier than previously thought. Although data supporting this idea are preliminary, it is clear that, if correct, this model would have major implications for the detection, treatment and prevention of metastases.

Because of the many new and invigorated ideas about the mechanisms by which tumour cells migrate and metastasize, this issue is a specially commissioned Focus on Migration and metastasis, produced with support from the Champalimaud Foundation and the Children's Cancer & Blood Foundation. All Focus articles are freely available online at [www.nature.com/nrc/focus/migration](http://www.nature.com/nrc/focus/migration) for 3 months.

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