# Chapter 1: Discovery

## I

The air had a harsh chill the day Xi Wangmu presented herself to me. She squinted her eyes under the rising sun, hospitably raised her hands and composed a warm welcoming smile. A smile broken only by the voids left behind by once upright teeth, now lost through years of malnutrition. I knew that I needed to meet her the moment I gazed upon her old frail body. Her faded navy tunic, mended multiple times with pale blue patches, was well worn and torn around the hip. The light cotton trousers extending from the bottom of her outerwear were three inches short, exposing a pair of thick grey woolen socks. On her feet, a mud-stained slipper, scarcely capable of providing comfort from the brutality of a cool autumn morning.

The exposed skin of Wangmu’s face, neck and hands was covered in pronounced wrinkles, the depth of which narrating the story of a difficult life. One consisting of manual labor and hard slogs. Of days worked in the terraced fields bordering Yingxiu Township and nights spent raising a family of four children. Her elderliness also evident in the fine strands of white-grey hair, fighting their way loose from the black scarf wrapped tightly around her head to protect herself from the cold mountain breeze.

Next to Wangmu lay her residence, a refuge shelter built from scavenged logs, tarpaulin and a variety of colorful canvases. The fast flowing waters of the Yuzixi River rushed behind her and was all that separated her shanty house from the steep landslide scarred slopes of the Siguniang Mountains. The bubbling sounds of a boiling pot of water propagated from inside her house and the sweet aroma of Chinese green tea filled the cool air.

I called for my guide who was inspecting the ruin behind me. Xun Guo treaded carefully through the rubble distributed between us and joined me on the river’s edge. I explained that I wanted to talk to Xi Wangmu and he begun speaking to her in Sichuanese Mandarin, a language spoken by roughly 120 million residents of Wenchuan County, China. Wangmu spoke of the horror that had befallen her town four months earlier. She explained how the ground trembled, the mountains roared and the buildings fell. I glanced behind me where less than one in five multi-storey buildings remained standing. The piles of rubble rose above my head and extended in all directions as far as I could see. The only route to where we stood, a bulldozer-cleared road barely wide enough for two vehicles.

Wangmu explained how the ground adjacent the river turned to liquid under heavy shaking; how the sheer slopes on all sides of the valley failed to contain landmass; and how boulders as large as buses rolled down the steep slopes, annihilating everything in their path. She spoke of the horror immediately following the earthquake and how survivors, desperately searching for loved ones, became acutely aware of their isolation upon realisation that ubiquitous landslides had enclosed the valley within which she lived. The residents of Yingxiu were left to fend for themselves in their greatest time of need.

Downstream, the path of the Yuzixi River had been dammed by one of thousands of massive landslides. The steep walls of the valley offered no place for the river to meander and the water began to rise. Within hours, the rapidly flowing waters engulfed the low-lying ruins of Yingxiu Township, forcing survivors to flee to higher ground. Those who could fought bravely against the odds treating the injured with whatever they could find until, some 24+ hours later, the army arrived in large numbers with supplies and much needed medical capabilities.

After describing the horrors of that day in early May, I noticed Wangmu’s face turn to an expression of grief. She now reported the ill fate of her own family of four children, their spouses and three grandchildren, all counted among the ninety thousand lost during the earthquake and ensuing flood.

It was unfathomable to me, that after what she had been through, Wangmu could compose a smile. That she could greet me, a foreigner unable to provide any hope of comfort or support, with such warmth and happiness. I knew immediately that there was something special about Xi Wangmu, that her resilience and desire to survive was incredible and that her ability to remain positive was a special trait, unique only to those who had experienced and survived a severe trauma. Several months would pass however, before the importance of this meeting would truly dawn upon me.

## II

In the beginning of that year’s Northern Hemisphere summer, the residents of Yingxiu found themselves deep-seated within the kill zone of the Great Sichuan Earthquake, the 12 May 2008 magnitude 7.9 catastrophic disaster. In its aftermath, more than 69,000 people were confirmed dead, 370,000 injured, 18,392 missing and more than 5 million homeless. 21 million buildings were damaged leading to a direct financial loss of $86 billion US dollars.

Everywhere I looked I saw the telltale signs of a massive earthquake. The extensive building damage, the landslide scared slopes and the 2m vertical offset, or fault scarp, in the road to the left of where we stood. Scientists who visited the area earlier reported finding vertical offsets exceeding 6m in some areas, a phenomenon only created by the world’s largest quakes.

I had travelled to the region with an international consortium of seismologists, engineers and architects; joining a local government organised field trip of earthquake-affected areas. The purpose of the exercise, to demonstrate progress of cleanup efforts and educate those of us not directly impinged, about the depth of devastation and ruin. After years spent modeling the impact of potential earthquakes on communities around the world, this field trip offered my first opportunity to observe the devastation first hand. I knew that it would be difficult, but nothing could have prepared me for the scale of destruction I saw. On the one hand, the scientist in me wanted to learn from the physical signs of the earthquake and the failure of the built environment to survive its violent shaking. My own humanity however, made it difficult to shift my thoughts from those killed and the 18,000 still missing, presumably buried under my feat as I navigated piles of rubble. A compelling sense of melancholy overcame me and I found it necessary to stop regularly, focus on my breathing and reflect on what had happened here, what had befallen these people and how heroic they were.

## III

Two days before leaving for China I rang my doctors surgery. A poor traveller at the best of times, I knew that I needed to restock my supply of sleeping tablets before boarding the plane. ‘Dr Morvai is not available tomorrow,’ informed the receptionist, ‘you can see Dr Wong if you like.’ ‘She’ll do,’ I replied.

The following day I entered the room where Dr Wong practiced, meeting her for the first time. Her petite fit figure and glowing fresh skin, evidence of her own good health. In complete contrast to my initial observation, she took one quick look at me, squeezed out a fleeting hello and insisted that I jump on the scales. She promptly recorded my height and sat down at her computer. ‘92 kg, 171cm …. I am sorry to say this but you are technically obese,’ she said with a bluntness that was no doubt unintended. ‘When was your last general medical examination,’ continued Wong whilst already scanning my medical records to answer the question herself. ‘I can’t see one here. We better do something about that I think.’ She scribbled onto a pathology request form and began speaking again as she passed me the form. ‘The nature of your physique makes you susceptible to cholesterol, diabetes and a range of other medical issues. Please see to these tests as soon as possible. Now what else can I do for you.’

‘I’m travelling for work tomorrow and need some sleeping tablets to ensure I get some rest on the plane,’ I replied. ‘You should see from my medical records that Dr Morvai has prescribed them before,’ and I pointed to her computer where my medical history remained open. ‘Yes I can see them,’ she said while extracting her booklet of empty scripts from the top shelf. She began madly writing once again and flicked me the script. ‘Good luck with your trip … don’t forget those tests,’ she commanded and I was quickly on my way.

I entered my car, a bright blue sporty looking but simple Mazda and adjusted the rear-view mirror so I could see my face. ‘As if doctor,’ I said quietly to myself with all the nonchalance of a 31 year old male certain of his own immortality. I recognised that I was well rounded, and with less physical activity over the last couple of years my belly had become more pronounced. ‘But obese,’ I thought, ‘nah!’ I folded the pathology form and upon filing it hastily in the glove box began driving to get my sleeping tablets from the pharmacist.

## IV

I returned from China in late October, flying to Canberra, Australia’s largest inland-, entirely planned-city and the seat of its Federal Government. By this stage I had been working in the public service for more than seven years. Employed by Geoscience Australia, the national agency for all things Earth Science, since 2001 I had already grown to love Canberra and greatly enjoyed working as a practicing seismologist modeling earthquakes to serve and advise a range of national and international user groups. I didn’t return to my Geoscience Australia office however. A few years earlier I had been posted to the Australian National University where I was undertaking a research project, of interest to both agency and university alike. I returned therefore, to the university where my project was conducted under the umbrella of a Ph.D. and was now well developed. My research on earthquake location in poor recording situations had largely been completed, my thoughts and conclusion materialized and more than half my dissertation written. I was expecting to submit my thesis within three months and was looking forward to returning to Geoscience Australia where my immediate future lay. My health had a different plan for me however, one that would not be realised for several more weeks.

A month or so passed. It was Thursday afternoon and I was madly working on the final chapters of my thesis. My mobile began to ring. ‘Hello,’ I greeted. ‘Hi David, it’s Arul here, how are you?’ replied my brother in-law from Singapore. How pleasant, a chance to chat with Arul my initial reaction. Then, acknowledging the unprecedented nature of a workday call from Singapore ‘is everything alright?’ I asked. ‘I’ve been trying to get ahold of Kavitha,’ my lovely and strong natured wife of six years, ‘do you know where she is?’ he inquired. ‘She’s probably in a meeting Arul, is there anything I can help you with?’ ‘Something’s happened,’ he said. ‘Dad’s had a heart attack! We’re at the hospital now and he’s about to go into surgery. They are going to put in some stents to open the blocked arteries’. We continued the discussion for a short while, the conversation concluding when I was satisfied that I understood all-important details. I began to track down Kavitha.

That night we booked tickets for Kavitha and Rathiga Tiah, our two-year-old active and gregarious daughter. We decided that I would stay in Canberra to tend to our circus of domesticated animals, two cats and two dogs, and keep the momentum in my thesis writing. We planned a Friday morning departure and three-week visit for the girls. Meanwhile, my father in-laws operation finished and he was moved to the recovery ward. My own throat was beginning to tingle and I was aware that I was falling ill.

The following day my beautiful girls left and I hit the sack. Recuperating in bed for the better part of a week, it was clear that I had a nasty virus. Both my father in-law and I, albeit from a far less serious illness, recovered quickly. He returned to his home in Singapore and I began to feel human once again. As my mind cleared of congestion I began to recognise the impossibility of this situation. ‘How is it that Raju,’ (my father-in-law), a regular exerciser and healthy man in his early sixties, ‘is having blockages in his arteries,’ I thought to myself. Then it dawned upon me. ‘We are not immortal are we! I must do something about those test.’

The following day I was at the pathology outlet as they opened their doors for Saturday morning trading. A quick prick later, the blood collected and I was sitting at the local café. ‘Why didn’t I just do that straight away?’ I began reflecting, ‘never mind, it is done now.’ I settled into a serve of eggs benedict and my usual morning startup, a double-strength espresso and began thinking about my thesis. ‘Where was I before I fell ill… that’s right… if I start there I will be back on track in no time.’ I soaked up the last dribble of runny yoke with the remaining toast and headed into the university to resume my scientific writing. I finished late that Saturday evening and returned early again on Sunday for another long day.

## V

It was 8:55am Monday 1st December and I had already been at university for two hours when my mobile rang again. ‘Hi David, it is Doctor Wong here. Your test results have arrived and I need to see you immediately! Can you get here as soon as possible.’ ‘Sure! I’m on my way now,’ I replied, walking past the printer to grab a draft of Chapter 5 on my way to the car. My mind was racing at a million miles an hour ‘Geez, it must be important. Immediately! She did say immediately didn’t she! What could it be? Glandular Fever?’ and I thought of my recent bout of virus and congested bed time. ‘No, you don’t say immediately for Glandular Fever. Diabetes! Oh Shit! I have type 2 diabetes. Yeah you would say immediately for that wouldn’t you… Damn! I am going to have to change my diet... But! I like my diet… And insulin, I’ll be needing that too!’ Then before I knew it I was parking my car with absolutely no recollection of haven driven the 10-minute journey to the GP’s practice.

For the first time in my life I didn’t have to wait for the doctor. I was ushered to Dr Wong’s room as quickly as I announced my presence. ‘So what is it?’ I barked as the door swung open. ‘Please sit down David,’ replied Dr Wong. ‘I am sorry to tell you this but the tests indicate that you have Leukemia.’ I glanced at the print hanging behind her, unable to look directly into her eyes. I recognised the painting but couldn’t recall the artist. ‘Phew,’ I thought to myself ‘that means I don’t have Diabetes,’ and in a complete state of ignorance I turned to Dr Wong. ‘Okay! But how is my cholesterol level. Will I need to change my diet?’ I asked. ‘You don’t need to worry about you cholesterol now. This is extremely serious David! I have contacted Canberra Hospital and they are expecting you. You need to report to the Emergency Room within the next couple of hours.’ ‘But I feel fine. Are you sure?’ I asked. ‘They will repeat the tests when you get there. I suggest you pack a small bag. You may need to stay overnight,’ she replied and I got up to leave. ‘There’s no need to pay for this one David, just get to the hospital as soon as you can,’ her final words as I left the office.

I was at home and on the phone to Singapore by 10am. With daylight savings the time difference is three hours so the time in Singapore, 7am. Saroja, my mother in-law answered the phone. We exchanged pleasantries, I sought information on Raju’s recovery and she asked how I was going. ‘Can I speak to Kavitha please?’ I requested. ‘She is sleeping,’ the reply. ‘Can you please wake her? I need to speak with her.’ A few moments later and a faint greeting echoed down the line. ‘Hi babe, it’s me,’ I replied. ‘David, how are you?’ she asked more clearly now as she began to wake. ‘Is everything okay?’ she continued. ‘No, I have just seen the doctor.’ ‘What, what is it!’ came her question with a great sense of urgency. ‘They think I have Leukemia. I have been asked to report to the hospital as soon as possible.’

I passed the little information that I had to Kavitha and we agreed to wait until I had seen the specialists before arranging her return. I made two more phone calls. One to my parents in Adelaide and a second to my sister Amanda, who lives three suburbs to the East of me in Western Belconnen. Amanda agreed to join me. I called for a cab; collected Amanda on the way and one ridiculously enormous fare later arrived at the Emergency Room of Canberra’s largest hospital.

After a small wait I was seen by the triage nurse and shown to a bed in the treatment area. Two doctors arrived, Emma a Hematology Registrar who did most of the talking and an accompanying intern on short-term rotation. Emma took a detailed medical history, gave a brief introduction to Leukemia and extracted a blood sample for repeat analysis. She explained that the new tests would determine the exact nature of my Leukemia, detailed knowledge of which would influence the treatment plan and determine the potential of its success.

I was admitted to the cancer ward with minimal fuss. Amanda left for home and I called Kavitha for the second time that day. This time we agreed that she should cut her trip short and return to Canberra as soon as possible. I then settled into the first of many featureless hospital meals and switched on the television, freely available only in the cancer ward.

## VI

I slept restlessly and woke early Tuesday morning. It didn’t take long to discover that a requirement for all hospital patients is patience. I waited, waited and then waited some more. Later that morning something eventually happened. I met Deidre, the cancer care coordinator, a nurse who would be integrated into my medical team and with whom I would develop one of many new friendships. Deidre’s first responsibility when a patient arrives is education.

In India, a guru is recognised as someone who eliminates the darkness of ignorance by passing knowledge (light) and educating the pupil. Deidre was to become my guru and there was a black-hole of darkness to eliminate. I couldn’t help but recall how I’d inappropriately asked Wong about cholesterol, having just learnt of my Leukaemia diagnosis. Having had little personal experience with Leukaemia, I knew only that it was a cancer of the blood, that it was more common in children and typically lead to hair loss somewhere along the trajectory of treatment. I had little idea where it came from, how it was treated or what to expect. Fortunately, Deidre started at the very beginning.

Bone marrow is the soft, spongy tissue found inside the majority of bones. In the kitchen it is the ingredient responsible for flavoring the highest quality meaty soups and can be a delicacy in its own right. In the body however, its role is somewhat more fundamental to our survival. It is responsible for producing the blood cells which, when suspended in liquid known as plasma, circulate throughout our bodies.

Blood cells can be categorised into three groups; red blood cells, white blood cells and platelets. Red blood cells collect oxygen from our lungs and transport it, via arteries, to body tissue. White blood cells, a fundamental component of the body’s immune system, defend the body against infectious disease and foreign material. Platelets are responsible for clotting and hence necessary to stop bleeding. They also deliver proteins and hormones that stimulate cell division and assist wound healing.

Leukaemia is a cancer of the blood or bone marrow. It leads to the rapid generation of immature white blood cells that are unable to function properly. In developed cases these malignant cells, also known as blasts, swamp the blood reducing the number of healthy functioning cells. As a result the carrier becomes susceptible to infection, excessive bleeding and lack of energy due to poor oxygen transport. Intense bone pain may also be experienced as the bone marrow becomes overcrowded with immature cells.

There are four primary forms of Leukemia, broadly classified by the type of white cells involved and how quickly the disease develops. Acute leukaemias develop quickly and can make the sufferer ill within weeks. In contrast, chronic leukaemias get worse more slowly and may not require treatment for years. Myeloid leukaemias impact white blood cells known as myelocytes, whereas lymphoblastic leukaemias affect lymphocytes, another form of white blood cell. The four main categories therefore become; acute lymphoblastic leukaemia (ALL), acute myeloid leukaemia (AML), chronic lymphoblastic leukaemia (CLL) and chronic myeloid leukaemia (CML).

‘We won’t know exactly how to treat your Leukaemia until the type is confirmed,’ stated Deidre. ‘However, we are pretty certain that it is acute and that it will involve chemotherapy,’ she continued. ‘Let’s talk about chemo now.’

Chemotherapy involves administrating combinations of cytotoxic drugs that attack and kill rapidly dividing cells such as the malignant blasts in my body. Unfortunately however, there are no chemotherapy regimes that target only ominous cells. That is, chemo assassinates both healthy and unhealthy cells alike and consequently leads to a raft of side effects, some of which can be lethal in their own right. Common side effects include ulceration of the digestive tract, hair loss and reduced blood counts. All three of the primary blood types are affected leading to poor oxygen delivery and exhaustion (red blood cells), immunosuppression and increased risk of fatal infection (white blood cells), excessive bleeding/bruising (platelets) and poor wound recovery (platelets).

‘Your blood counts will drop after your chemo!’ Deidre continued. ‘It is important that you understand that you are susceptible to all sorts of infection when this happens. This state is known as neutropenia, and your body will not have an operating immune system so you must be extremely careful. You will need to wash your hands continuously and avoid public places, even common areas of the hospital. You will also have to be careful with what you eat. You can’t have anything raw unless you peel it and you should only drink bottled water. Just imagine that you are travelling in a developing country,’ and I thought how much more wonderful that would be. Deidre rapped up her lesson and I was left alone to reflect upon what lay ahead.

## VII

Later that afternoon Emma returned. ‘The blood test has confirmed your Leukaemia David. It looks like you have AML. We would like to take a biopsy of your bone marrow though. This will be more accurate than the blood analysis and will help us confirm how developed your disease is.’ ‘Emma… are you sure?” I replied. ‘I don’t feel sick at all,’ I continued. ‘We’ve caught it early, David. Acute diseases like this propagate very quickly. Left untreated… You would be very sick and possibly die within weeks.’ ‘What if I had done the tests in October when I first saw the doctor?’ I asked. ‘It is possible that we would not have seen the disease at all a few months ago. I would say that you are very lucky. Lucky that you undertook the test when you did! The disease has developed enough to be detected but not so much that you are symptomatic. Now, let’s get on with this biopsy shall we?” suggested Emma.

This would be the first of more than a dozen bone marrow biopsies. The procedure involves extracting a sample of bone marrow from the hipbone analysis in the lab. Following Emma’s directions, I lay on my side and crunched my legs in a foetal position. She selected and marked the entry site. There was a sharp prick as the needle punctured the skin. She injected local anesthetic to numb the area. Then, a spirited PAIN as Emma twisted her hand, the needle piercing the hard casing of bone and entering the cavity that marrow calls home. She attached a syringe and sucked out the aspirate or liquid marrow. Then she swapped to a trephine needle, a larger instrument with cylindrical blade, and rotated it painfully to extract a sample of solid marrow.

The biopsy was conducted in my room. It does not require a trip to theatre and general anesthetic is not used. Sedation is provided and on a good day the patient will remain responsive during the procedure but will not remember it afterwards. This day, in early December was not one of those days. I clearly recall the pain as the needle entered and twisted within the bone. The pain occurs because local anesthetic is unable to penetrate the bone, and is hence useless during the bone-piercing stages of the procedure. The bone aches for a few days after each biopsy.

## VIII

I was reunited with Kavitha and Rathiga the following morning, for the first time since my diagnosis. It was a relief to have my girls with me once again. I filled Kavitha in on the latest details while Rathiga coloured quietly in the corner. Emma returned. This time Dr Michael Pidcock, the lead consultant on my case and head of the Haematology Department, joined her. ‘The bone marrow aspirate suggests that you have ALL and not AML,’ he said. ‘The difference is probably not significant for you; it just changes the chemo protocol that we use. We need to wait another day or so however, to get the results from the solid marrow sample,’ continued Pidcock.

‘We have booked the theatre for tomorrow to insert a Hickman’s Line,’ Emma pitched in. ‘A Hickman’s line?’ I asked. ‘It’s a special type of intravenous catheter that is inserted in your chest above the nipple. It will allow us to take regular blood tests without poking you and will be the means by which we administer your chemo. Unlike a catheter in the wrist which must be changed every 48 hours or so, the Hickman’s line can remain in place for extended periods. If it doesn’t get infected we will continue to use it for the duration of your treatment.’

This was the first time Kavitha had met any of the doctors and it was my first exposure to Pidcock. We interrogated them on a range of topics. They responded courteously to each question and waited patiently for further digging.

‘What are my chances?’, the latest gradation in our long inquisition. ‘The road will be difficult but your chances are reasonably good! We are aiming for a long disease-free life here,’ replied Emma. ‘We hope to start the chemo on Friday. Try not to worry, we think you’ll do ok,’ they concluded before leaving my room.

That night I thought of Xi Wangmu. I recalled the warmth of her grin and positive outlook. ‘If she can cope with her torment, then I can deal with this,’ I said quietly to myself. My thoughts drifted however, to the man I knew as my father. Falling to a long illness when I was only four, I knew that Peter’s last days were a struggle. Dying at the meagre age of 33, only 2 years older than the 31-year-old frame lying in my bed, I held very few memories of him. Contemplating his premature death abducted my concentration to the fragility of life and my own mortality. ‘Will my daughter remember me?’ My brain was once again racing at a million miles an hour. ‘The inspiration of Wangmu… the slow painful passing of Peter … what would become of me?’ Eventually Wangmu won this one, the first of countless battles over my psyche. ‘It will, WILL be okay!’ I convinced myself as a tried to settle for another sleepless night.

## IX

The night nurse woke me as she prepared to take another set of observations. I was glad to be awake now for I had been dreaming. Subconsciously, I’d been processing the few memories that I had of Peter. The most vivid of these, a pantomime, taking place in the kitchen of our old house in Christie Downs, an outer suburb on the Southern fringe of Adelaide. Peter was leaning over the bench, blood as red as vine-ripened tomatoes streaming endlessly from his mouth at an alarming rate. I could fell the ossicles in my ears begin to vibrate violently to the sound of blood crashing into the sink bottom and I desperately searched my sole but couldn’t find a more buoyant memory. I couldn’t remember him chasing me; couldn’t recall him throwing a ball; couldn’t educe a single moment where the two us were playing. Then, all of a sudden, a great sense of guilt swept over me. Four years and this was the best I could muster. Blood, blood, blood everywhere!

Sweat was pouring from my forehead and I was becoming uncomfortable with my dark thoughts, when all of sudden, it struck me! I had found my second source of inspiration. I was determined that I would not fall to the same fate as Peter. I could not and would not do that to my gorgeous Rathiga Tiah. There would be ballet concerts; math exams to prepare for; bust-ups with inappropriately selected boyfriends; and teenage dramas. She was going to need her father. Nothing was going to stop me from being there for her.

## X

Thursday morning came around and I began fasting for the Hickman’s insertion, not scheduled until early that afternoon. First however, I was taken to nuclear medicine for a gated heart pull scan to confirm whether my heart had the pumping capability to adequately distribute toxic chemo throughout my arteries. The scan involved the extraction of a small sample of blood, subsequently mixed with radioactive material and then re-injected into my arm. A short rest, necessarily provided for the radioactive agents to distribute throughout my body and reach my heart. I was attached to an electrocardiograph (ECG) and positioned me under the gamma camera, a purpose built imager to track the gamma rays emitted during nuclear decay of the radioactive materials she had mixed into my blood. Forty-five minutes later the ECG leads were removed and my heart was deemed ready.

I was escorted back to my room and Deidre dropped in for the next verse of my education. ‘Now we know your type of Leukaemia we can start planning the chemotherapy,’ she said. ‘You will be treated by a protocol known as HyperCVAD. Reserved for the most aggressive forms of Leukaemia and traditionally administered to young fit patients, HyperCVAD is separated into two courses, each with their own concoction of drugs. The different courses are known as arms A and B. During arm A we deliver the following drugs; Cyclophosphamide, Vincristine, Doxorubicin (also known as Adriamycin) and Dexamethasone – hence the acronym CVAD. Arm A also includes doses of Cytarabine, Mesna and Methotrexate’. My brain rattled with all these foreign terms and Deidre continued, ‘in course B you will receive Methotrexate, Leucovorin, Sodium Bicarbonate and Cytarabine.’

‘Because these drugs are so aggressive we have to deliver them in a hyperfractionated fashion. This means that each of arms A and B will be repeated multiple times with drug doses at tolerable levels. We will most likely give you three rounds of each so you will have six courses of chemo in total. We will start with course A tomorrow. It will take four days to deliver the chemo. You can expect your blood levels to drop shorty afterwards and you will become neutropenic. Remember all the precautions we discussed the other day? You are at serious risk of infection when you are neutropenic so you must follow the precautions carefully. Eventually, your blood levels will bounce back and once the doctors are satisfied with your health we will start course B. For all intents and purposes, course B is the same as A only the drugs differ. Again, you will receive the chemo over a four-day period, become neutropenic and then recover. Each cycle should take about three weeks, depending on your recovery. We will try to get you out of hospital between the courses of chemo if we can. It all depends on your health.’

Dedre continued ‘Most of the drugs will be delivered via your Hickman’s line. Unfortunately however, there is a chance with your Leukaemia that it might cross into the brain or spinal cord. At least one of the drugs, the Methotrexate, will therefore be delivered by a lumbar puncture or spinal tap. A sample of the cerebrospinal fluid will be collected at the same time. The sample will be analysed to determine whether your Leukaemia has indeed crossed into the spinal cord.’

## XII

The Hickman’s insertion was my first experience with theatre since my knee reconstruction; necessary to repair a torn anterior cruciate ligament sustained playing football three years earlier. Unlike the knee reconstruction however, I would not receive the benefit of general anaesthetic for this one.

I lay on my back on the operating table. Theatre nurses draped my chest with sterile sheets and washed the open areas with antiseptic. There were several pricks as the surgeon injected local anaesthetic on the right side of my chest. He paused to allow the local to take affect and then made two incisions. The first of these, known as the entrance site, was located at the jugular vein near the collarbone. The second, the exit site, was roughly 12 cm lower on the chest wall. He created a tunnel under the skin, joining the exit and entrance sites. The singular silicon rubber tube of the Hickman’s line was then pushed into the exit site and through the tunnel until it broke through the entrance site.

The surgeon then bent the tube, changing its direction and routing it towards an opening in the jugular vein that he had made earlier. The idea is to insert the tube into the vein and advance it through the superior vena cava, a thicker vein transporting deoxygenated blood from upper body to heart, until it reaches the heart’s right atrium. This was proving problematic however. I could feel the surgeon pushing at the line as he attempted to position it. He was zoning in on the desired location when, all of a sudden, the pressure became overwhelming and the line popped out again. He repeated the process over and over again. Each attempt ending with the line blasting out in vigour. He began cursing, seemingly oblivious to my consciousness.

As if I wasn’t nervous enough to begin with, now the doctor was ranting somewhat aimlessly at an obstinate piece of silicon. I was clearly becoming more agitated with each passing attempt. The theatre nurse squealed as I squeezed her hand with force and the surgeon asked that someone call for his supervisor. A second nurse began moving towards the phone, the one under my grip detained and unable to move. The surgeon was explaining that he might need some help with this one and then, miraculously the line reported into place and he cancelled his request.

An X-ray was taken to confirm that the line was in the correct position, the surgeon placed a stitch at the entrance site to hold it in place and a nurse began cleaning the blood which had spilled all over my chest. A clear waterproof dressing was placed over the exit site. In the end, only the tubing below the exit site was visible. A vertically aligned rise in the skin joining the two incision sites,

the sole evidence of the catheter above the exit point. Below the dressing the Hickman’s line separated into two tubes and dangled freely. Each tube had its own clamp and bung, specially designed to attach to a syringe when required. As well as sampling blood and delivering chemo, the Hickman’s line would be used to administer other drugs such as antibiotics, saline fluids and blood transfusions as required.

## XIII

That night I turned to sleeping tablets, my old friend, to ensure that I was well rested for the initiation of treatment. My mother arrived on Friday morning and Emma visited me on her daily rounds. ‘I am sorry David, but I have some more bad news for you. We have completed the bone marrow analysis and you are Philadelphia positive (Ph­­+). This means that your Leukaemia cells have an abnormality in which parts of chromosomes 9 and 22 swap places. Unfortunately, it impacts your prognosis. Philadelphia positive ALL is excessively aggressive and patients are more likely to relapse after treatment. It is likely that chemotherapy alone will not be enough to hold your Leukaemia at bay. You will need a bone marrow transplant after the chemo is finished. This could add up to another year to your treatment.’ I looked at her in horror, as I knew that I now faced more than a year and half of hell.

‘We will talk more about the details of a transplant once we find you a donor,’ continued Emma. ‘In the meantime, I need to ask you about your family. We will start with the family; this is the most likely place we will find a donor. Failing that, there is an international register of donors. We can usually find a suitable match from the global database if there is no one in your family.’ I filled Emma in on my family members. She decided to begin with type matching my mother and sister.

‘There is one thing I was wondering Emma,’ I said. ‘Of course David, go ahead.’ ‘The chemo is starting today. Will I be able to keep drinking coffee? Coffee is really important to me.’ ‘Of course David! You can drink as much coffee as you like,’ and Emma left me alone to reflect on the latest disagreeable news.

It was at that point that I realised I had not asked the old Chinese earthquake refugee what her name was. If she was going to be a source of inspiration then she needed a name. I settled on Xi Wangmu, the ancient Chinese goddess of immortality and dispenser of longevity, prosperity and eternal bliss. She is the cultivator of the peach of immortality, a fruit whose juicy flesh imparts a new lease of perpetuity to the immortals every six thousand years.

Not only did I feel it appropriate, maybe even necessary, to enlist the support of a goddess of immortality with a six thousand year ritual; I realised that this choice suited my other galvaniser. Almost three years ago, and after much debate, my wife and I named our daughter after two deities; Rathiga a goddess and beloved of Lord Krishna in the great Sanskrit epics that form the philosophical foundation of Hinduism; and Tiah, a recognised derivative of Theia, the mythological Greek goddess of light and mother of the sun, moon and dawn.

As my chemo drew closer I thought of Xi Wangmu and I thought of Rathiga Tiah. I had no idea what I was in for but somehow I knew that, with three deities behind me, it would be okay.