

出國報告（出國類別：考察）

赴布吉納法索進行「二手電腦斷層掃描儀捐贈暨教育訓練案」返國報告

服務單位：國際合作發展基金會人道援助處 邱子瑄計畫經理
義大醫院醫學教育部 孫灼均部長
義大醫院一般影像診斷科 張家欣技術組長

派赴國家：布吉納法索

出國期間：民國 101 年 12 月 9 日至 9 月 18 日

報告日期：民國 101 年 12 月 23 日

摘要

本案依據本(101)年計畫目標及工作內容，完成「二手電腦斷層掃描儀捐贈暨教育訓練」之工作，順利將在國內遴募之兩部二手電腦斷層掃描儀贈交布國 Centre Hospital Regional De Ouahigouya 以及 Centre Hospital Regional De Tenkodogo，並就全案進行整體檢討並提出具體建議供下次辦理類似案件時之參考。

為更精進「友好國家醫事人員訓練計畫」之目標，採取布國 6 名學員於義大醫院受訓返國後，由義大醫院醫學教學部及一般影像診斷科技術組長實際考核學員返國後在原單位之操作情形，確保本項醫事人員訓練計畫達到技術移轉之實質效果。

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壹、緣起與目的

我國因衛生醫療服務水準提升，多數醫療院所、醫療器材廠商或學術單位為提供國人較佳之醫學診斷服務，定期汰換諸多醫療儀器設備，該等設備使用維護狀況甚佳，雖為二手舊品，惟之於我友邦國家已等同當地最先進之設備；而為整合國內醫療資源以強化外交醫療合作之量能，99年起本會及國際衛生醫療聯盟醫院與衛生署委託國立臺灣大學醫學院附設醫院醫學工程部（臺大醫工部）之「醫療器材援助平台（Global Medical Instruments Support and Service, GMISS）」計畫，共同辦理二手醫療儀器勸募並捐贈我友邦國家，並搭配專家赴我友邦提供儀器裝設、維修及操作基本教育訓練工作，以提升友邦國家醫療服務硬體設施及醫療服務水準。

本(101)年度「二手電腦斷層掃描儀捐贈暨教育訓練」捐贈布吉納法索案，係由上(100)年捐贈兩部電腦斷層掃描儀與布國 Kaya 地區醫院及 Koudougou 友誼醫院，捐贈典禮後，經當地媒體報導後，引起極大迴響。

布國衛生部長於上年特在詢問駐布大使代尋二手電腦斷層儀，援贈與甫完成修繕工程之 Tengodogo 以及北部大城 Ouahigouya 2 家區級醫院之可能性，經衛生署 GMISS 平台協助確認台中童綜合醫院本年度汰換 GE Hispeed DX/i CT 乙台及宜德醫材股份有限公司捐贈二手 GE Hispeed FX/i CT 乙台，並透過公開招標方式，委託專業廠商進行兩部 CT 外觀整理、零件更換、耗材補充、周邊設備添購、特殊包裝運送以及現地安裝及教學等服務，2 部 CT 整理後於 8 月底交付海運，CT 運抵布國後，分贈予 Centre Hospital Regional De Ouahigouya 以及 Centre Hospital Regional De Tenkodogo。

本案教育訓練部分搭配本會「友好國家醫事人員訓練計畫」以提升醫療技術人員之專業技能，以達到全案之完整性。2 家受贈醫院於本年 10 月，各派遣 3 名醫事人員(醫師、放射師及醫工各 1 名)共計 6 名來台訓練，由義大醫院協助提供渠等 CT 圖像判讀、CT 操作、安全防護、例行性維護及基本維修等技術訓練，本次出差特商請義大醫院醫學教育部孫灼均部長及一般影像診斷科技術組張家欣組長赴布，除了提供 2 家受贈醫院 CT 相關使用

人員現地教育訓練外，亦將就 5 名(1 名不克前來)來台受訓人員之返國後受訓成果進行評核。

綜合以上，本次赴布吉納法索進行「二手電腦斷層掃描儀暨教育訓練計畫」之工作目標及內容如下：

- 一、 「二手電腦斷層掃描儀暨教育訓練計畫」採購案(採購案號:ICDF-101-026)駐地驗收。
- 二、 提供電腦斷層掃描儀使用教育訓練。
- 三、 進行本案國醫事人員 5 名來台訓練返國後學習成效驗收。

貳、工作日程

案經我駐布國大使館及醫療團溝通協調及安排，本會人員及 2 名專家於布國之各項工作日程如下表：

日期	工作內容
12 月 10 日 星期一	抵達布國
12 月 11 日 星期二	C T 教育訓練及驗收資料準備
12 月 12 日 星期三	前往 Centre Hospital Regional De Ouahigouya 進行 C T 教育訓練、驗收以及學員受訓後評值
12 月 13 日 星期四	前往 Centre Hospital Regional De Tenkodogo 進行 C T 教育訓練、驗收以及學員受訓後評值
12 月 14 日 星期五	參訪駐布國醫療團及古都古醫院
12 月 15 日 星期六	大使午宴，返程

參、二手電腦斷層掃描儀捐贈暨教育訓練案

一、工作成果

「二手電腦斷層掃描儀捐贈暨教育訓練案」係由本會針對布吉納法索特定需求進行之規劃，在義大醫院醫學教育部孫灼均部長及一般影像診斷科技術組張家欣組長協助下，依據出差設定之目標，順利完成所有工作，渠等工作之報告如附錄一，簡述本案工作成果如下：

(一) 「二手電腦斷層掃描儀暨教育訓練計畫」採購案(採購案號:ICDF-101-026)駐地驗收

在大使館及醫療團以及義大醫院專家協助下，確認本案委託廠商懋霖醫療儀器有限公司已將 2 部 CT 運抵布國 2 家受贈醫院 CHR de Ouahigouya 及 CHR de Tenkodogo，提供 2 家受贈醫院相關英/法文版 CT 操作、維修手冊，且派遣技術人員，在布國進行裝機配線並完成測試、參數設定及校準之工作，另該公司技術人員提供有關維護、操作及異常狀態緊急處理之教育訓練，驗收紀錄及教育訓練紀錄表如附錄二。

(二) 提供電腦斷層掃描儀使用教育訓練。

大使館指派黃竣鴻先生擔任本案之教育訓練翻譯，以協助孫灼均部長、張家欣組長以及廠商工程師在兩家受贈醫院指導放射技術員，實際為病人進行檢查，從病人進入 CT 房、準備、上檢查台、固定病患及定位等進行多次練習，以俾利兩家醫院之放射師日後可獨立作業。

(三) 進行本案國醫事人員 5 名(一位不克前來)來台訓練返國後學習成效驗收

分別由孫灼均部長、張家欣組長進行本案 5 名來台訓練之布國醫事人員返國後成效驗收，並完成渠等返國後評量如附錄參。綜合來說，5 名來台受訓學員返國後表現良好，部分人員在台期間雖稍有語言能力限制，學習效果不盡理想，但態度積極及返布

進行實際操作及演練時，獨立作業之能力均獲兩位專家肯定，使本次搭配捐贈案所進行的「友好國家醫事人員訓練計畫」極為成功，進而使得本案達成「機構功能提升」之效果以及加強「人員能力建構」之目的，以促使本案更為完整。

- (四) 另有關捐贈典禮事，兩家受贈醫院院長皆表示十分感謝，但恰逢布國醫院罷工，大使館擬將與布國衛生部協調後，另辦理捐贈儀式。

實際操作教學情形



簽署驗收報告



二、結論與建議

【結論】

本計畫深受布方衛生部及 2 家受贈醫院以及我駐布國館團之肯定，在多方人員共同努力下，確實達到 CHR de Ouahigouya 及 CHR de Tenkodogo 兩家醫院「機構功能提升」之效果以及加強「人員能力建構」之目的。

【建議】

繼續搭配「友好國家醫事人員訓練計畫」，將儀器贈送提升機構功能之外，人員之能力建構完整，才可促成受援國醫院之醫療品質之提升。

另有關義大醫院一般診斷科張組長家欣在返國報告中提及布國放射人員自行調整管電壓由 120K V 調整至 140K V 事，由於張組長赴布國進行兩家醫院回複示教時，皆無及時反映，請渠提供說明供布方醫院參考，以減少精密儀器操作不當而導致使用年限縮短(建議信如附錄四)。

肆、101 年度二手醫療儀器捐贈案-

本年 9 月捐贈乳房攝影機至捐贈布國 CHR de Kaya，9 月份本會人員偕同台大醫院醫工部 3 位工程師前往布國組裝醫療儀器及教育訓練，捐贈項目之一乳房攝影機，在開始組裝，發現機身有多處凹陷(無合適搬運工具如推高機因素)，經專家緊急維修以及連繫國內原廠後，乳房攝影機可正常開機，但無法射出輻射線，無法運作。

經排除原因並拆卸 3 塊主機電路板回台灣維修，確認其中一塊問題，經本會購買後連同原先 2 塊一並送回布國，由駐布國醫療團育德威醫學工程師協助安裝及測試後，機器無出現 Error code 之情形，並可正常運作。

駐布國醫療團育德威工程師組裝電路板情形



維修後正常之面板畫面



伍、致謝

本次赴布吉納法所執行業務期間，承蒙駐布大使館張大使銘忠熱情款待並予方針指導與精神鼓勵，特此申謝；另駐布大使館王秘書文麟、騰特別助理春祐以及翻譯黃專員峻鴻傾力相助，拜會布國計畫合作單位以洽談合作事宜並協調台布有關人員外，亦不吝提供大使館之建議及資源，協助本贈送案得以順利推動進行，實銘感五內。

此外，本次也要感謝醫療團黃團長其麟、團員以及役男們，撥冗介紹醫團業務以及協助參訪古都古醫院，讓兩位專家了解在艱辛的醫療環境中，有一群默默在幫助友邦之醫事人員，辛苦的為友邦人民無私的奉獻。

最後，感謝本次義大醫院醫學教育部孫灼均部長及一般影像診斷科技術組張家欣組長，不但在短短的出差期間，協助完成本出差計畫之目的，不僅展現專業，不吝提供相關醫學知識及操作技巧，更是展現親善與隨遇而安之態度，獲得布方一致好評，充分展現台灣優秀醫療人才之專業。

在館團完善規劃及大力堆動之下，使得本次台布醫療合作又再一次圓滿成功，在此要再次感謝所有參與本計畫的工作夥伴，鼎力相助。

附錄一

人員訓練及出國報告（出國類別：考察）

101 年二手電腦斷層掃描儀（CT） 捐贈暨教育訓練計畫考察

服務單位：義大醫院（醫學教育部、放射診斷科）

姓名職稱：孫灼均醫師、張家欣組長

派赴國家：布吉納法索

出國期間：2012.12.09 – 2012.12.18

報告日期：2012.12.20

壹、報告摘要

一、布國人員在臺訓練：布國放射診斷科醫師及技術員於義大醫院接受為期兩月的訓練（訓練期間：101年10月至101年12月），課程內容包括電腦斷層基本教育訓練、檢查程序、顯影劑投予及過敏之處理程序、基本判讀技巧及注意事項、實際指導布國人員現場操作等；每週一至週五課程安排緊湊，更為布國放射技術員安排至具與捐贈布國同型號電腦斷層掃描儀之醫院實地操作學習；兩月訓練完畢布國放射診斷科醫師及技術員各派代表一人進行口頭結訓心得報告，布國人員於義大醫院舉行結訓典禮及餐敘後隔日整裝回國。

二、赴布行程及內容：於2012年12月9日自臺灣啓程前往布吉納法索；於12月10日（星期一）抵達布國；於12月11日舉行電腦斷層掃描（CT）工程師、國合會承辦人員、醫師及放射師會議，進行CT教育訓練及驗收資料準備；於12月12及13日分別前往 Centre Hospital Regional De Ouahigouya 及 Centre Hospital Regional De Tenkodogo 進行CT教育訓練、驗收以及學員受訓後評值；於12月14日參訪醫療團及古都古醫院，12月15日與大使午宴，當晚從布吉納法索飛巴黎；12月16日於巴黎轉機過夜；12月18日抵達台北。

三、整體成果評估及展望：布國放射診斷科醫師及技術員於義大醫院接受為期兩月的訓練後，能於其布國所屬醫院成功地操作電腦斷層掃描儀及判讀CT影像，進一步與布國人員面談確認CT的增設對當地病患及醫師為一大福音，相關人員於在臺訓練後皆樂於和同事分享臺灣經驗，其教學及學習熱誠亦較訓練前明顯提昇，盼日後能針對布國需求繼續提供適切的醫療協助。

貳、 布國人員在臺訓練課程內容

醫師課程表

第一週

日期	課程	單位	備註
10/15	Orientation 1.ICDF & NHCA introduction 2. Life guide 3. Basic Mandarin Course 4.Country report by participants	國合會	
10/16	1.Registration 2.Country report by participants (about ten minute for each person) 3.Bank & supplies buying	義大醫院醫教 課	
10/17	1.to buy digital products 2.visiting E-Da World	義大醫院醫教 課	
10/18	1.Physical examination 2.Basic Concepts of Infection Control	義大醫院醫教 課、感染科、體 檢科	
10/19	Basics of CT scanner	放射部	

第二週

日期	課程	單位	備註
10/22	Basics of CT scanner	放射部	

10/23	CT image acquisition	放射部	
10/24	Brain Imaging (I)-basics	放射部	
10/25	Brain Imaging (II)-trauma	放射部	
10/26	Brain Imaging (III)-strokes	放射部	

第三週

日期	課程	單位	備註
10/29	Brain Imaging (IV)-Tumors	放射部	
10/30	Head & Neck Imaging (I)	放射部	
10/31	Head & Neck Imaging(II)	放射部	
11/1	Head & Neck Imaging (III)	放射部	
11/2	Thorax Imaging (I)-General	放射部	

第四週

日期	課程	單位	備註
11/5	Thorax Imaging (II)-General	放射部	
11/6	Thorax Imaging (III)-Infection	放射部	
11/7	Thorax Imaging (III)-Neoplasm	放射部	
11/8	Thorax Imaging (IV)-Vascular	放射部	
11/9	Cardiovascular Imaging	放射部	

第五週

日期	課程	單位	備註
11/12	GI & Hepatobiliary Imaging(I) -General	放射部	
11/13	GI & Hepatobiliary Imaging(II) -Infection & Inflammatory diseases,part I	放射部	
11/14	GI & Hepatobiliary Imaging(III) -Infection & Inflammatory diseases,part 2	放射部	
11/15	GI & Hepatobiliary Imaging(IV&V) -Trauma & Vascular diseases	放射部	
11/16	ICDF & NHCA visiting	放射部	

第六週

日期	課程	單位	備註
11/19	Uroradiology(I) -General	放射部	
11/20	Uroradiology(II) -Congenital anomalies	放射部	
11/21	Uroradiology(III) -Infectious diseases	放射部	
11/22	Uroradiology(IV) -Neoplastic diseases	放射部	
11/23	Pelvic Imaging(I) -Pelvic inflammatory diseases	放射部	

第七週

日期	課程	單位	備註
11/26	Pelvic Imaging(VI) -Neoplastic diseases	放射部	
11/27	Interventional & Vascular Radiology	放射部	
11/28	Interventional & Vascular Radiology	放射部	
11/29	Spine & Musculoskeletal CT	放射部	
11/30	Assessment of performance	放射部	

第八週

日期	課程	單位	備註
12/3	City tour	醫教課	
12/4	Discuss with your teacher for the Accomplishment Report	放射部	
12/5	City tour	醫教課	
12/6	City tour	醫教課	
12/7	Accomplishment Report	放射部、醫教課	

放射師課程表

第一週

日期	課程	單位	備註
10/15	Orientation 1.ICDF & NHCA introduction 2. Life guide 3. Basic Mandarin Course 4.Country report by participants	國合會	
10/16	1.Registration 2.Country report by participants (about ten minute for each person) 3.Bank & supplies buying	義大醫院醫教課	
10/17	1.to buy digital products 2.visiting E-Da World	義大醫院醫教課	
10/18	1.Physical examination 2.Basic Concepts of Infection Control	義大醫院醫教課、 感染科、體檢科	
10/19	Introduction of computed tomography	放射部	

第二週

日期	課程	單位	備註
10/22	The basic operation of computed tomography	放射部	
10/23	Neuro CT	放射部	
10/24	Neuro CT	放射部	
10/25	Neuro CT	放射部	
10/26	Neuro CT	放射部	

第三週

日期	課程	單位	備註
10/29	Neuro CT	放射部	
10/30	Abdomen CT	放射部	
10/31	Abdomen CT	放射部	
11/1	Preventive maintenance, Maintenance	放射部	
11/2	Thorax CT	放射部	

第四週

日期	課程	單位	備註
11/5	Neuro CT	放射部	
11/6	Neuro CT	放射部	
11/7	Abdomen CT	放射部	
11/8	Abdomen CT	放射部	
11/9	Abdomen CT	放射部	

第五週

日期	課程	單位	備註
11/12	Musculoskeletal System	放射部	
11/13	Musculoskeletal System	放射部	

11/14	Musculoskeletal System	放射部	
11/15	Musculoskeletal System	放射部	
11/16	ICDF & NHCA visiting	放射部	

第六週

日期	課程	單位	備註
11/19	Assessment of performance	放射部	
11/20	Assessment of performance	放射部	
11/21	Assessment of performance	放射部	
11/22	Assessment of performance Oral presentation	放射部	
11/23	Assessment of performance Oral presentation	放射部	

第七週

日期	課程	單位	備註
11/26	Kaohsiung Municipal Gangshan Hospital run by Show Chwan memorial Hospital	放射部	
11/27	Kaohsiung Municipal Gangshan Hospital run by Show Chwan memorial Hospital	放射部	
11/28	Kaohsiung Municipal Gangshan Hospital run by Show Chwan memorial Hospital	放射部	
11/29	Kaohsiung Municipal Gangshan Hospital run by Show Chwan memorial Hospital	放射部	

11/30	Kaohsiung Municipal Gangshan Hospital run by Show Chwan memorial Hospital	放射部	
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第八週

日期	課程	單位	備註
12/3	City tour	醫教課	
12/4	Discuss with your teacher for the Accomplishment Report	放射部	
12/5	City tour	醫教課	
12/6	City tour	醫教課	
12/7	Accomplishment Report	放射部、醫教課	

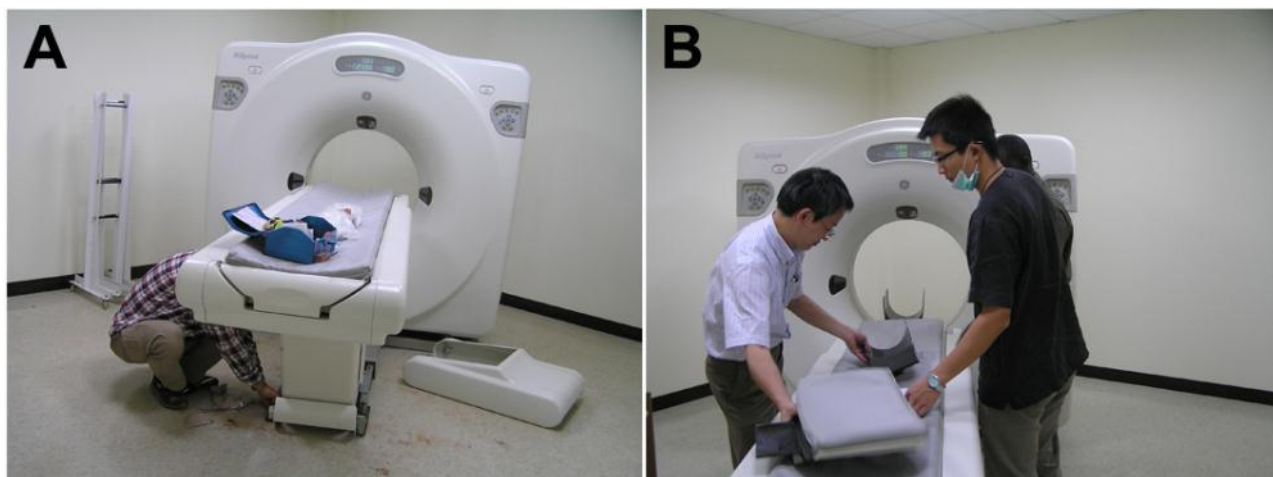
參、 赴布國每日工作紀要

日期	活動內容
2012.12.09	啟程（高鐵左營站 → 桃園中正國際機場 → 巴黎轉機 → 布國首都 Ouagadougou 機場）
2012.12.10	抵達布國首都 Ouagadougou 及下榻當地旅館
2012.12.11	CT 教育訓練及驗收資料準備（工程師、國合會承辦人員、醫師及放射師會議）
2012.12.12	前往 Centre Hospital Regional De Ouahigouya 進行 CT 教育訓練、驗收以及學員受訓後評值
2012.12.13	前往 Centre Hospital Regional De Tenkodogo 進行 CT 教育訓練、驗收以及學員受訓後評值
2012.12.14	參訪醫療團及古都古醫院
2012.12.15	大使午宴，布吉納法索－巴黎
2012.12.16	巴黎轉機過夜
2012.12.17-18	巴黎 → 桃園中正國際機場 → 高雄

肆、於布國工作內容具體成果

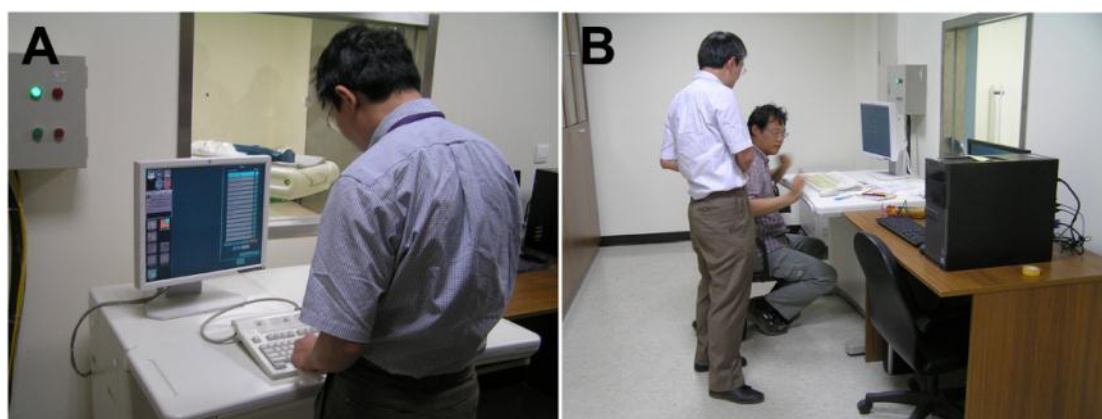
一、二手電腦斷層儀採購案駐地驗收

(一) 提供電腦斷層儀安裝及測試



圖一、臺灣電腦斷層 (CT) 工程師安裝及測試電腦斷層掃描儀：(A) Ouahigouya, (B) Tenkodogo。

(二) 提供電腦斷層檢查相關電腦軟、硬體



圖二、臺灣 CT 工程師安裝及測試與電腦斷層掃描儀連線之電腦軟、硬體：(A) Ouahigouya, (B) Tenkodogo。

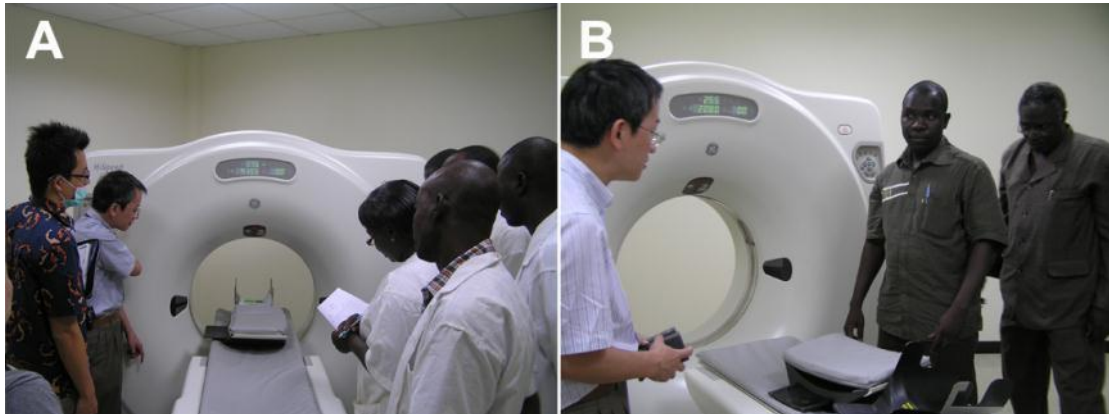
二、提供電腦斷層教育訓練

(一) 提供電腦斷層檢查程序



圖三、臺灣 CT 工程師透過翻譯人員向布國醫師及放射技術員解說 CT 檢查之操作程序，包括開機、校正、病人基本資料輸入、影像獲取及存檔：(A) Ouahigouya, (B) Tenkodogo。

(二) 提供電腦斷層儀操作注意事項

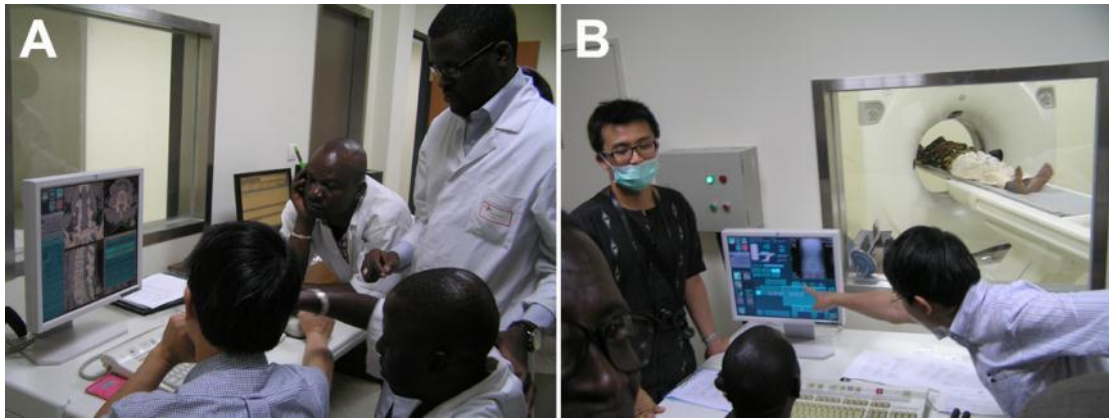


圖四、臺灣 CT 工程師向布國醫師及放射技術員說明該型號電腦斷層儀之實際操作注意事項及常見疑難排解：(A) Ouahigouya, (B) Tenkodogo。

(三) 提供顯影劑投予及過敏之處理程序

與顯影劑投予及過敏相關之處理於布國醫師及放射技術員在臺灣時已向其詳細說明，到達布國後由臺灣醫師複習顯影劑投予的注意事項，包括顯影劑種類、投予之適應症、時機及過敏之處理程序等。

(四) 提供電腦斷層掃描儀基本判讀技巧及注意事項



圖五、與布國人員討論電腦斷層掃描儀之基本判讀技巧：(A) Ouahigouya, (B) Tenkodogo。

(五) 訓練電腦斷層掃描儀種子師資



圖六、CT 種子師資包括布國醫師及放射技術員，其於義大醫院接受訓練後訓練當地人員操作。

(六) 實際指導受贈單位人員現場操作及影像判讀

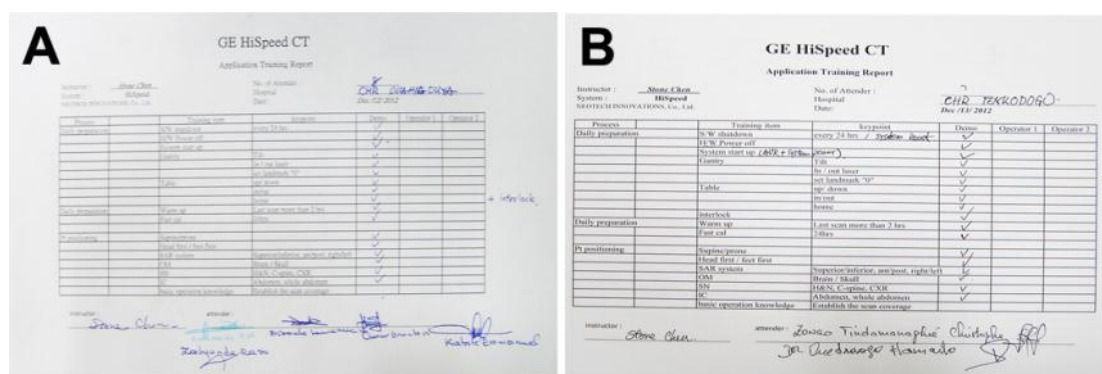
於 Ouahigouya 挑選四位受測者分別接受腦部、胸腔、腹腔、脊椎之電腦斷層掃描，發現脊椎受測者有腰椎滑脫(Spondylolisthesis)情形；於 Tenkodogo 另挑選四位受測者分別接受頭部(兩位)、胸腔(一位)、腹腔(一位)之電腦斷層掃描；其中兩位頭部受測者分別被發現有臉骨骨折及曾有顱內出血情形，胸腔受測者出現肺氣腫影像、腹腔受測者被發現罹患膽囊炎及肝膿瘍。



圖七、(A、B) 於 Centre Hospital Regional De Ouahigouya 實際指導受贈單位人員現場操作及影像判讀情形；(C、D) 於 Centre Hospital Regional De Tenkodogo 實際指導受贈單位人員現場操作及影像判讀情形。

三、 進行布國放射醫事人員來台訓練返國後學習成效驗收

在操作技術方面，於布國訓練完成後，布國醫師及醫事人員需確認各訓練項目所列之目標已達成（圖八）；在整體訓練成效方面，義大醫院醫師及放射師組長分別評估布國醫師及醫事人員受訓後於知識、技術、態度層面上之改善以及其是否樂意分享其臺灣經驗（附件一）。



圖八、操作技術訓練項目達成確認表：(A) Centre Hospital Regional De Ouahigouya, (B) Centre Hospital Regional De Tenkodogo。

伍、 結論

目前電腦斷層種子技師基本操作流程訓練已完成，布國放射醫師及醫事人員返國後實作成效良好，人員積極學習，態度和善、熱情，此次為實地第二次瞭解布國狀況，未來必能更適合給予訓練課程，幫助布國人民提升醫療檢查品質。

伍、心得建議

布國放射科醫師及醫事人員在學校並無受過電腦斷層任何課程，此次訓練涵蓋電腦斷層基本原理、影像取得及判讀、各項基本參數意義等；實際臨床需多作病人檢查以累積經驗，日後布國評估如有需要學習更

進一步的知識技術，可回來加強訓練，各學員有實際操作電腦斷層經驗，學習起來會更加容易；在影像判讀及診斷方面，建議布國建立雲端上傳平台（如 Dropbox），有判讀困難之影像可諮詢本院放射科專科醫師意見，不但有助布國病患適時診斷，亦提供布國放射科醫師臨床繼續學習機會。

在放射技術方面，在台灣大部份放射師不會更改掃描參數管電壓 (KV)，多為 120KV，義大醫院西門子和奇異牌 16 切電腦斷層也多用 120KV，得知此次去年的放射師將其管電壓調到 140KV，實為不解為何更改參數，有類似操作上的狀況發生，建議告知本單位，做為日後教學重點項目，布國人員教學不似教台灣學生，有無法預期的狀況發生，建議一段時間可回傳各部位電腦斷層影像給本單位，便可得知使用條件是否正確，掃描範圍是否合宜，電腦斷層是需要經驗累積，技術師必須處理病人多種情況（如躁動），需判讀狀況較特別的病人且提供醫師需要的影像，決定影像何種程度為可接受範圍，若影像上有假影，需判斷是可排除或不可排除，類似情況都必須臨床教學及經驗累積。

附錄二

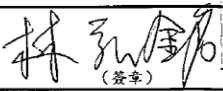
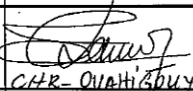
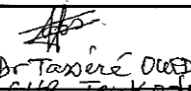
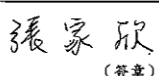
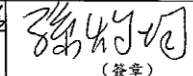
財團法人國際合作發展基金會

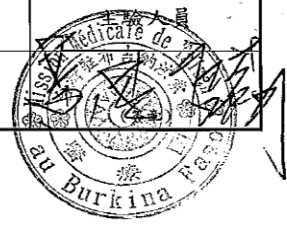
驗收紀錄

全部 部份

日期：101年12月14日

地點：布吉納法索

案 號	ICDF-101-026	廠 商 名 稱	懋霖醫療儀器有限公司
採 購 案 名	「布吉納法索二手電腦斷層掃描儀捐贈暨教育訓練」		
採 購 金 額	<input type="checkbox"/> 未達公告金額 <input checked="" type="checkbox"/> 公告金額以上 <input type="checkbox"/> 未達查核金額 <input type="checkbox"/> 查核金額以上未 <input type="checkbox"/> 達巨額 <input type="checkbox"/> 巨額	驗 收 批 次	第三批次第三階段
契 約 金 額	新台幣 7,002,900 元	履 約 期 限	全案：廠商應於101年6月26日起 至101年11月30日之期間內履行採 購標的之供應。(契約變更延至102 年1月31日)
結 算 金 額	已支付第一期款(契約價金 35%) 新台幣 2,451,015 元，及第二期款 (契約價金 30%)新台幣 2,100,870 元。 本次支付第三期款(契約價金 35%) 新台幣 2,451,015 元。	完 成 履 約 日 期	101年12月14日
契約變更或加減價次數	1	履約有無逾期	無
<p>一、案情紀要： 本案參照政府採購第71條辦理驗收。</p> <p>二、驗收經過： 1-本案已經由駐布吉納法索大使館、駐布吉納法索醫療團及本會代表共同簽署，分別於101年12月13日及14日在布吉納法索 Tengodogo 及 Ouahigouya 地區醫院完成2台CT之安裝及測試。 2-已確認廠商完成提供當地操作人員16小時以上之基本操作維修課程(詳附件如後)。 3-上揭表列金額、履約期限、完成日期經需求單位確認無誤。</p> <p>三、驗收結果：</p> <p>四、備註：</p>			
記 錄 (採購單位)	廠 商 代 表	會 驗 人 員 (需求及使用單位)	
 (簽章)	 (簽章)	 CHR-OUAHIGOUYA (簽章)  Dr. Taxire Ouédraogo CHR-TENKODOGO	
協 驗 人 員 (設計、監造、專業委託、採購單位)	本機關監驗人員 (監辦單位)	上級機關監驗人員或 授權自辦文號	
 (簽章)	駐布吉納法索大使館  (簽章)	 (簽章)	



GE HiSpeed CT

Application Training Report

Instructor : Stone Chen
 System : HiSpeed
 NEOTECH INNOVATIONS, Co., Ltd.

No. of Attender : 8
 Hospital : CHR OUAHIA OUYA
 Date: Dec/12/2012

Process	Training item	keypoint	Demo	Operator 1	Operator 2	
Daily preparation	S/W shutdown	every 24 hrs	✓			
	H/W Power off		✓			
	System start up		✓			
	Gantry	Tilt	✓			
		In / out laser	✓			
		set landmark "0"	✓			
		Table	up/ down	✓		
		in/out	✓			
		home	✓			
		Daily preparation	Warm up	Last scan more than 2 hrs	✓	
		Fast cal	24hrs	✓		
Pt positioning	Supine/prone		✓			
	Head first / feet first		✓			
	SAR system	Superior/inferior, ant/post, right/left	✓			
	OM	Brain / Skull	✓			
	SN	H&N, C-spine, CXR	✓			
	IC	Abdomen, whole abdomen	✓			
	basic operation knowledge	Establish the scan coverage				

+ interlock,

instructor : Stone Chen

attender : [Signature]
o u e d r a o g o P. P. H
Zachande Raso
Diboule Laurencia
Quar Grunbozi
Kabole Emmanuel

Scan Desktop		Pt registration	Pt information	✓		
		operation 1	Select scan protocol	✓		
		operation 2	Scout	✓		
		operation 3	Show localizer	✓		
		operation 4	Pre-contrast Axial scan	✓		
		operation 5	Repeat series	✓		
		operation 6	Post-contrast helical scan			
		operation 7	One more scan	✓		
		operation 8	End of Examination	✓		
			Change scan mode/ scan time	✓		
			Change parameter			
	Review layout	Auto-view (Auto-display only)				
		review				
Display desktop	Display / Review	operation 9	Patient list	✓		
		operation 10	Select pt	✓		
		operation 11	Image prior	✓		
		operation 12	Image next	✓		
		operation 13	WW/WL	✓		
		operation 14	ROI measurement	✓		
		operation 15	Length measurement	✓		
			ESI	✓		
Display desktop			Reformation	✓		
Management		operation 16	Send image to mini-PACS	✓		
		operation 17	Remove image	✓		
		operation 18	Archive image	N/A.		
		operation 19	System status	✓		
		operation 20	Error log	✓		

	Portal	Indication	Operator	Instructor
PT 1	Thorax	Check up.		Stone.
PT 2	Abdomen	R/O renal stone.		Stone
PT 3	Brain	Trauma PA.		Stone
PT 4	L-spine	Lumbago.		Stone

GE HiSpeed CT

Application Training Report

Instructor : Stone Chen
 System : HiSpeed
 NEOTECH INNOVATIONS, Co., Ltd.

No. of Attender : 4
 Hospital : CHR TEKKODOGO
 Date : Dec /13/ 2012

Process	Training item	keypoint	Demo	Operator 1	Operator 2
Daily preparation	S/W shutdown	every 24 hrs / system reset	✓		
	H/W Power off		✓		
	System-start-up (AVR + System timer)		✓		
Gantry		Tilt	✓		
		In / out laser	✓		
		set landmark "0"	✓		
		Table	up/ down	✓	
		in/out	✓		
		home	✓		
		interlock	✓		
Daily preparation	Warm up	Last scan more than 2 hrs	✓		
	Fast cal	24hrs	✓		
Pt positioning	Supine/prone		✓		
	Head first / feet first		✓		
	SAR system	Superior/inferior, ant/post, right/left	✓		
	OM	Brain / Skull	✓		
	SN	H&N, C-spine, CXR	✓		
	IC	Abdomen, whole abdomen	✓		
	basic operation knowledge	Establish the scan coverage			

instructor : Stone Chen

attender : Zonas Tindamanaphie Christophe
Joe Ouedraogo Hamalo

Scan Desktop		Pt registration	Pt information	✓		
		operation 1	Select scan protocol	✓		
		operation 2	Scout	✓		
		operation 3	Show localizer	✓		
		operation 4	Pre-contrast Axial scan	✓		
		operation 5	Repeat series	✓		
		operation 6	Post-contrast helical scan	✓		
		operation 7	One more scan	✓		
		operation 8	End of Examination	✓		
			Change scan mode/ scan time	✓		
			Change parameter	✓		
	Review layout	Auto-view (Auto-display only)				
		review				
Display desktop	Display / Review	operation 9	Patient list	✓		
		operation 10	Select pt	✓		
		operation 11	Image prior	✓		
		operation 12	Image next	✓		
		operation 13	WW/WL	✓		
		operation 14	ROI measurement	✓		
		operation 15	Length measurement	✓		
			ESI	✓		
Display desktop			Reformation	N/A		
Management		operation 16	Send image to mini-PACS	✓		
		operation 17	Remove image	✓		
		operation 18	Archive image	N/A		
		operation 19	System status	✓		
		operation 20	Error log	✓		

	Portai	Indication	Operator	Instructor
PT 1	Chest	Check up		Steve
PT 2	Abdomen	Lower hepatitis		Steve
PT 3	Brain	trauma		Steve
	Brain	trauma		Steve



POST-TRAINING EVALUATION FORM

In order to develop professional medical human resources and improve the quality of medical services for partner countries, the TaiwanICDF conducts the "Healthcare Personnel Training Program" to share Taiwan's abundant clinical knowledge, experience and cutting-edge medical practices. All program participants are placed at an appropriate medical institution in Taiwan for one to three months and receive the highest quality clinic training available in accordance with their individual needs. Over 170 medical personnel have been trained successfully since the program was initiated in 2005.

The program aims to provide much-needed practical training of a kind that trainees can put to immediate use on returning to their day-to-day work. In order to verify that training has yielded successful results, we request your kind assistance to complete this Post-Training Evaluation Form, so that we can understand the extent of the transformation of our program participants following their return to the workplace. Your assessment will help us to understand the value of the program and assist us as we continue to make improvements. Please return the completed form to Ms. Michelle T. H. Chiu TaiwanICDF Project Manager, by:

- ✓ Email: t.h.chiu@icdf.org.tw
- ✓ Fax: 886-2-28766475

If you have any further comments or suggestions about the Healthcare Personnel Training Program, you are more than welcome to send them to the TaiwanICDF using the above contact details. We sincerely appreciate your time and look forward to receiving your response. Thank you!

1. Basic Evaluee Data (i.e. the participant under evaluation)

Note: For your reference, information in this section is provided by the TaiwanICDF, based on the participant's original application.

Name: Emmanuel Kabore


Organization and Department: CHR De Ouahigouya

Training Field: RADIOLOGY

Training Subject: CT Scan

Training Duration: 02 months

- Constraints before training:
1. Before this training we didn't
 2. have CT Scan
 3. _____

 衛生部 中華民國 衛生部 醫教部	Date (Date/Month/Year) 20/12/2012	Signature Chang-Chia-Hsin
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5. Evaluated by: Name: Chang-Chia-Hsin
 Position and Title: Chief of Technican
 Organization and Department: Division of General Radiology
 Relationship to evaluatee: Teacher

None

4. If you have any further comments, please use this space:

3. How would you rate the evaluatee's overall performance after taking part in this training program?
 Excellent Good Average Poor Very Poor

2. Evaluation

On a scale of 1 to 5, please rate the performance or attitude of the evaluatee in accordance with your own close observation. Please use 1 to indicate strong disagreement through to 5 to indicate strong agreement.

Observation	Score (1 to 5)
1 The evaluatee actively shares the professional knowledge he/she learned in Taiwan with colleagues.	4
2 The evaluatee actively shares the experience of his/her stay in Taiwan.	4
3 The evaluatee is more devoted to his/her work after the period of training.	4
4 The evaluatee is able to bring the skills he/she learned in Taiwan into full play.	4
5 The evaluatee shows more confidence in his/her work after the period of training.	4
6 The evaluatee shows the capacity to ease or eliminate the constraints listed above.	4
7 The evaluatee has contributed to an actual improvement in his/her department.	4/5



POST-TRAINING EVALUATION FORM

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The program aims to provide much-needed practical training of a kind that trainees can put to immediate use on returning to their day-to-day work. In order to verify that training has yielded successful results, we request your kind assistance to complete this Post-Training Evaluation Form, so that we can understand the extent of the transformation of our program participants following their return to the workplace. Your assessment will help us to understand the value of the program and assist us as we continue to make improvements. Please return the completed form to Ms. Michelle T. H. Chiu TaiwanICDF Project Manager, by:

- ✓ Email: t.h.chiu@icdf.org.tw
- ✓ Fax: 886-2-28766475

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1. Basic Evaluee Data (i.e. the participant under evaluation)

Note: For your reference, information in this section is provided by the TaiwanICDF, based on the participant's original application.

Name: OUEDRAOGO PAKISBA ALI

Organization and Department: CHR. De Ouahigouya

Training Field: Radiology (CT Scan)

Training Subject: C.T. Scan

Training Duration: 2 months

Constraints before training: 1. _____

2. _____

3. _____

2. Evaluation

On a scale of 1 to 5, please rate the performance or attitude of the evaluatee in accordance with your own close observation. Please use 1 to indicate strong disagreement through to 5 to indicate strong agreement.

	Observation	Score (1 to 5)
1	The evaluatee actively shares the professional knowledge he/she learned in Taiwan with colleagues.	5
2	The evaluatee actively shares the experience of his/her stay in Taiwan.	5
3	The evaluatee is more devoted to his/her work after the period of training.	5
4	The evaluatee is able to bring the skills he/she learned in Taiwan into full play.	5
5	The evaluatee shows more confidence in his/her work after the period of training.	5
6	The evaluatee shows the capacity to ease or eliminate the constraints listed above.	5
7	The evaluatee has contributed to an actual improvement in his/her department.	5

3. How would you rate the evaluatee's overall performance after taking part in this training program?

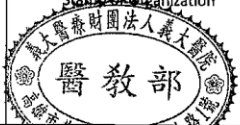
- Excellent
 Good
 Average
 Poor
 Very Poor

4. If you have any further comments, please use this space:

Excellent learning attitude

5. Evaluated by:

Name: *CHUO-CHUN SUN M.D., Ph.D.*
 Position and Title: *Head of Department of Medical Education*
 Organization and Department: *E-De Hospital, TAIWAN*
 Relationship to evaluatee: *Supervisor (Taiwan)*

Signature	Date (Date/ Month/Year)	Stamp of Organization
<i>Chueh-Hwan Sun</i>	<i>12/12/2012</i>	



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- ✓ Email: t.h.chiu@icdf.org.tw
✓ Fax: 886-2-28766475

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1. Basic Evaluee Data (i.e. the participant under evaluation)

Note: For your reference, information in this section is provided by the TaiwanICDF, based on the participant's original application.

Name: OUEDRAOGO Hamanta
Organization and Department: Department of Radiology (CHR de TENKOU)
Training Field: CT-Scan
Training Subject: CT-Scan
Training Duration: 02 months
Constraints before training: 1.
2.
3.

2. Evaluation

On a scale of 1 to 5, please rate the performance or attitude of the evaluatee in accordance with your own close observation. Please use 1 to indicate strong disagreement through to 5 to indicate strong agreement.

	Observation	Score (1 to 5)
1	The evaluatee actively shares the professional knowledge he/she learned in Taiwan with colleagues.	5
2	The evaluatee actively shares the experience of his/her stay in Taiwan.	5
3	The evaluatee is more devoted to his/her work after the period of training.	5
4	The evaluatee is able to bring the skills he/she learned in Taiwan into full play.	5
5	The evaluatee shows more confidence in his/her work after the period of training.	5
6	The evaluatee shows the capacity to ease or eliminate the constraints listed above.	5
7	The evaluatee has contributed to an actual improvement in his/her department.	5

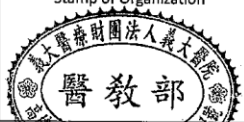
3. How would you rate the evaluatee's overall performance after taking part in this training program?

- Excellent Good Average Poor Very Poor

4. If you have any further comments, please use this space:

5. Evaluated by:

Name: *CHUO-CHUN SUN, M.D. Ph.D.*
 Position and Title: *Head of Department of Medical Education*
 Organization and Department: *E-Da Hospital, TAIWAN*
 Relationship to evaluatee: *Supervisor (Taiwan)*

Signature <i>Chuo-Chun Sun</i>	Date (Date/ Month/Year) <i>13/12/2012</i>	Stamp of Organization 
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POST-TRAINING EVALUATION FORM

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- ✓ Fax: 886-2-28766475

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1. Basic Evaluee Data (i.e. the participant under evaluation)

Note: For your reference, information in this section is provided by the TaiwanICDF, based on the participant's original application.

Name: QUEBA, ABDOURASMANIN
 Organization and Department: CHR OF TENKONOGO
 Training Field: RADIOLOGY
 Training Subject: CT SCAN
 Training Duration: 2 months
 Constraints before training: 1. Before this training, we didn't have
 2. CT scan in our hospital
 3. _____

2. Evaluation

On a scale of 1 to 5, please rate the performance or attitude of the evaluatee in accordance with your own close observation. Please use 1 to indicate strong disagreement through to 5 to indicate strong agreement.

	Observation	Score (1 to 5)
1	The evaluatee actively shares the professional knowledge he/she learned in Taiwan with colleagues.	4
2	The evaluatee actively shares the experience of his/her stay in Taiwan.	4
3	The evaluatee is more devoted to his/her work after the period of training.	4
4	The evaluatee is able to bring the skills he/she learned in Taiwan into full play.	4
5	The evaluatee shows more confidence in his/her work after the period of training.	4
6	The evaluatee shows the capacity to ease or eliminate the constraints listed above.	4
7	The evaluatee has contributed to an actual improvement in his/her department.	N/A

3. How would you rate the evaluatee's overall performance after taking part in this training program?


Excellent Good Average Poor Very Poor

4. If you have any further comments, please use this space:

None

5. Evaluated by:

Name: *Chang, Chia-Hsin*
 Position and Title: *Chief of technician*
 Organization and Department: *Division of General Radiology*
 Relationship to evaluatee: *teacher*

Signature <i>Chang, Chia-Hsin</i>	Date (Date/ Month/Year) <i>20/12/2012</i>	
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POST-TRAINING EVALUATION FORM

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- ✓ Email: t.h.chiu@icdf.org.tw
- ✓ Fax: 886-2-28766475

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1. Basic Evaluee Data (i.e. the participant under evaluation)

Note: For your reference, information in this section is provided by the TaiwanICDF, based on the participant's original application.

Name: ZONGO Tindawaghré Christophe
 Organization and Department: CHR de TENKODOGO
 Training Field: RADIOLOGY
 Training Subject: CT Scan
 Training Duration: 02 months
 Constraints before training: 1. Before this training we didn't
 2. have a CT Scan.
 3. _____

2. Evaluation

On a scale of 1 to 5, please rate the performance or attitude of the evaluatee in accordance with your own close observation. Please use 1 to indicate strong disagreement through to 5 to indicate strong agreement.

	Observation	Score (1 to 5)
1	The evaluatee actively shares the professional knowledge he/she learned in Taiwan with colleagues.	4
2	The evaluatee actively shares the experience of his/her stay in Taiwan.	4
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5	The evaluatee shows more confidence in his/her work after the period of training.	4
6	The evaluatee shows the capacity to ease or eliminate the constraints listed above.	4
7	The evaluatee has contributed to an actual improvement in his/her department.	N/A

3. How would you rate the evaluatee's overall performance after taking part in this training program?

Excellent Good Average Poor Very Poor

4. If you have any further comments, please use this space:

None


5. Evaluated by:

Name: Chang Chia-Hsin

Position and Title: Chief of Technician

Organization and Department: Division of General Radiology

Relationship to evaluatee: Teacher

Signature	Date (Date/ Month/Year)	Stamp of Organization
Chang Chia-Hsin	20/12/2012	

附錄四

To the Radiology Technicians of the Centre Hospital Regional De Koudougou, Centre Hospital Regional De Kaya, Centre Hospital Regional De Tengodogo and Centre Hospital Regional De Ouahigouya

Dear Colleagues,

Adjustment of CT operation voltage from 120 kV to 140 kV is NOT recommended because an increased voltage of 140 kV may overheat the machine, leading to equipment damage and failure.

We recommend the operation voltage of 120 kV. If there is further question regarding the setting of CT scan, you are always welcome to keep us informed.

We would also like to know the exact reason for the change in setting from 120 kV to 140 kV so that we can provide the appropriate advice.

With my best regards,

Chia-Hsin Chang

Department of Diagnostic Radiology

E-Da Hospital

TAIWAN