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タイ国立ガンセンター年次協議  
調査団報告書

昭和47年3月

海外技術協力事業団

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国際協力事業団	
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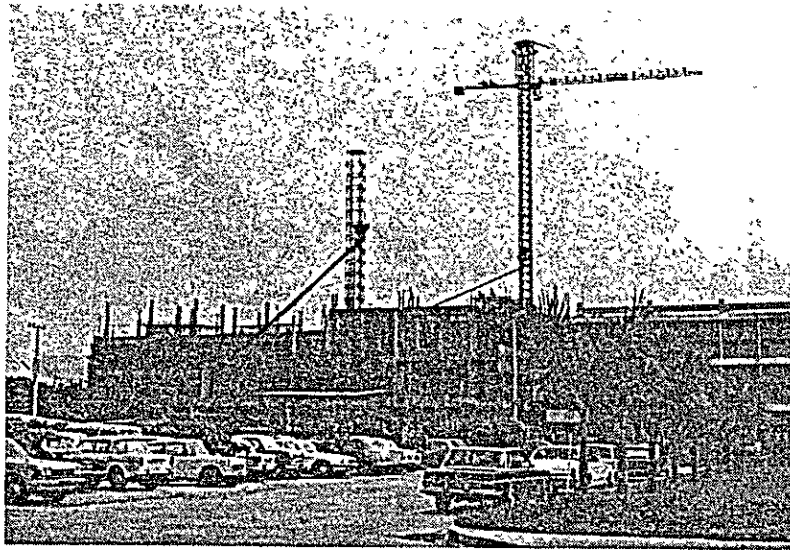
## は　じ　め　り

アジアの友好国としてのタイ国は、かねてより我が国の進んだ癌治療技術に多大の期待を寄せており、国立ガンセンターの御協力のもとに昭和41年度よりプロジェクトを実施してきている。協力の目的は、タイ国立ガンセンターを設立し、同センターの癌早期診断部門の充実することにあった。協力の方式としては、専門家派遣機材供与、カウンターパートの受入により同センターの近代化を計ってきたのである。幸いにして国立ガンセンターを始めとする関係各位並びにタイ側の御協力により、昭和45年度末をもって、機材供与額累計は1億947百万円に達し、64名の専門家を派遣し、22名の研修員を受入れることが出来た。関係各位の御力添えにより、本協力が大きな成果を収めるにつれ、全センターの外来患者数も着実に増加しているのが現状である。今回、協力第6年次を迎えるに当たり、タイ国政府から、全センターを名実共に近代的、且総合的癌治療センターとするための今後3カ年にわたる協力を強く要請してきた。要請の内容は、放射線、外科、臨床検査、肝癌、各部門の充実におかれていた。この要請に応じて、政府ベースによる協力範囲、方式、期間、環境等を調査する目的を以って派遣されたのが、今回の調査団である。本報告書は、その調査結果と協議の内容を纏めたものである。ここに本書を発刊するに当たり、調査団員各位、国立ガンセンター、関係各位、並びに現地において御世話を戴いた日本大使館在バンコック関係者、及び、タイ国公衆衛生省、国立ガンセンターDTEC等の御協力に深甚なる謝意を表する次第であります。なお、本報告書が、協力関係者のみならず、広く一般の方々の御参考ともなれば幸甚です。

昭和47年3月1日

海外技術協力事業団

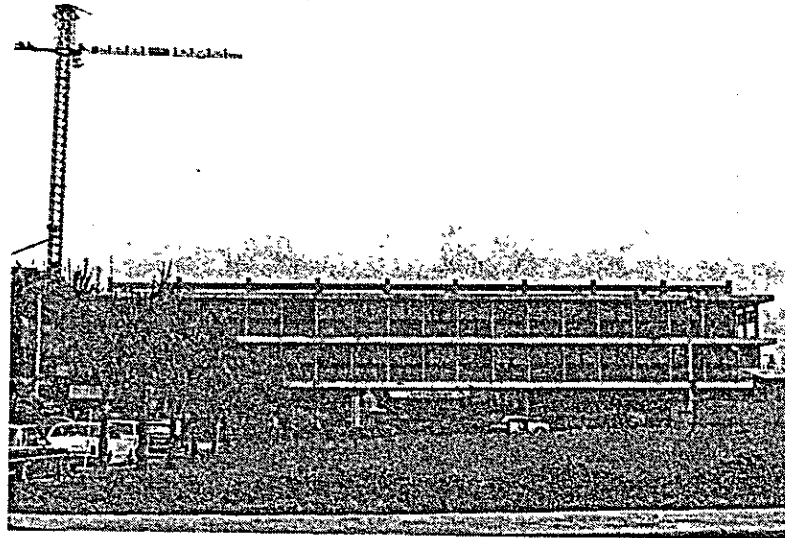
理事長 田 付 景 一



タイ国立がんセンター病院建設工事全景



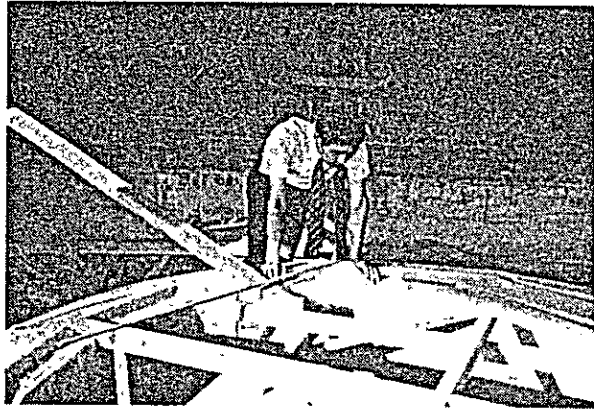
6月18日 午後日・タイ双方議事録に署名, 出席者: 日本側  
左より, OTCA バンコック事務所高橋職員, OTCA 医療協  
力部堀田職員, バンコック官本所長, 新谷課長, 伊藤部長,  
北川部長, 仁井谷医長, 籍本書記官長, 若宮専門家



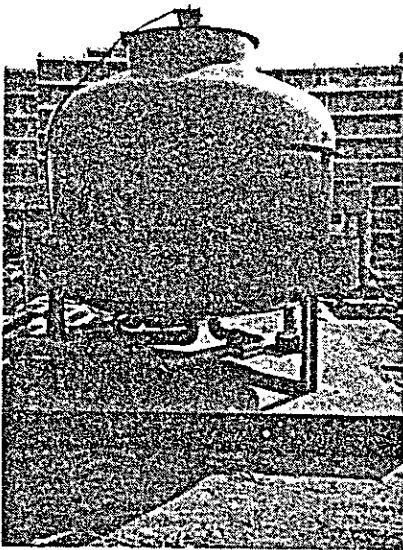
タイ国立がんセンター診療部門全景



6月18日 議事録署名, タイ側代表  
左よりDr. Manop, Mr. Somsak, Mr. Permsak,  
Dr. Somchai, Dr. Komol, Dr. Phatbul,  
Dr. Phisit



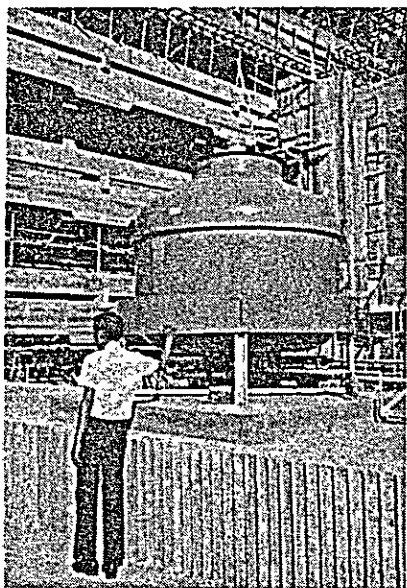
手術見学室



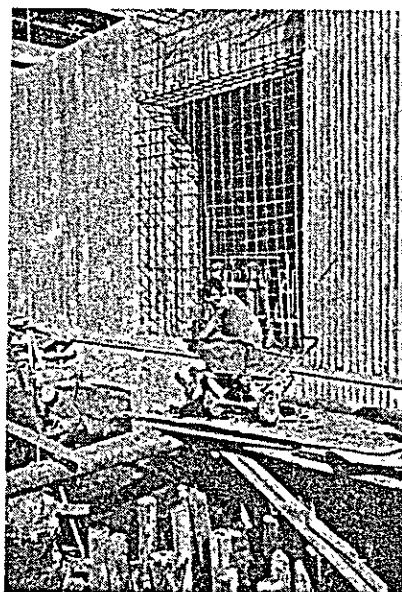
リニアック空調  
クーリングタワー



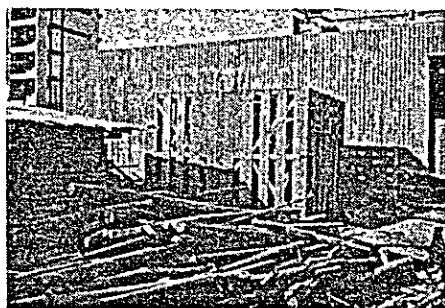
手術室



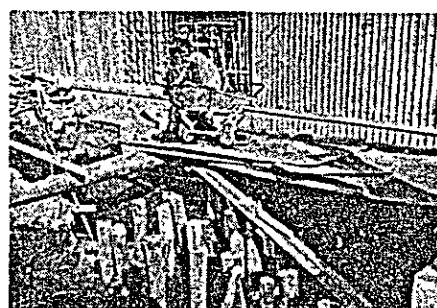
ダイキン・クーリングタワー



NEC・リアック搬入口



オルガノ水質軟化装置



オルガノ水質軟化装置据付位置



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## 1. 団長、国立がんセンター運営部長石戸利貞報告

### 1. 今年次協議の目的

- (1) タイ国立がん研究所プロジェクト（以下、N.C.Iプロジェクトと略称）に対する日本の医療協力事業5ヵ年計画〔1967（昭和42）年度～1971（昭和46）年度〕は、タイ会計年度1971年9月30日、日本会計年度1972年3月31日をもって終了の予定であるが、昨年来タイ政府から本事業をもう3年間続けてほしいとの強い要望があり、日本政府としても詳細検討の結果、これに同意する意向を固めたので3年の延長期間（日本年度昭和47年4月1日～昭和50年3月31日、タイ年度1971年10月1日～1974年9月30日）内に行なうべき事業の原則的事項について協議すること。
- (2) これまでのN.C.Iプロジェクトの実績について再検討すること。
- (3) 病院建設の進行状況を把握し、所要の助言を与えること。
- (4) 1972年3月31日までの器材供与、タイ研修員の受け入れ、日本人専門家の派遣に関する具体的事項の検討を行なうこと。
- (5) 1971年2月石川病院長タイ国訪問時にタイ側から要請のあった、がん化学療法に関する講義を行なうこと。

### 2. 調査団の編成および派遣期間

#### (1) 編 成

石戸 利貞：団長、運営、国立がんセンター運営部長、医師

伊藤 一二：スーパーバイザー、外科部門、国立がんセンター病院病棟部長、医師

北川 俊夫：放射線部門、国立がんセンター病院放射線診療部長、医師

仁井谷久暢：化学療法及び生化学部門、国立がんセンター病院臨床検査部生化学検査室  
医長、医師

新谷 鉄郎：公衆衛生行政、厚生省医務局医事課長

堀田 吉男：調整、海外技術協力事業団医療協力部

#### (2) 派 遣 期 間

自 1971年（昭和46年）6月 7日

至 1971年（昭和46年）6月19日 13日間

### 3 日 程

6月 7日（月）12:30 JAL 461便にて一行6名東京国際空港を出発

17:55 バンコク、ドンムム空港着。タイN.C.Iのソムチャイ博士、

バームサック氏等の出迎をうける。アジアホテル投宿。

6月8日(火) 10:30 日本大使館訪問, 穂崎巧公使, 鍋木伸一二等書記官(厚生省から出向)等に挨拶, 海外技術協力事業団(O.T.C.A)バンコク事務所訪問, 宮本守也所長, 高橋彰氏に挨拶。

14:30 N.C.Iにてソムチャイ博士等と打合せ

6月9日(水) フリー 国王即位25周年記念日

6月10日(木) 9:15 公衆衛生省表敬訪問, 副大臣ソンプーン博士, 次官コモル博士に挨拶

10:30 第1回総合会議

14:30 石戸, 伊藤, 新谷, 堀田は国家開発省技術経済協力局を表敬訪問。その後N.C.Iにて個別会議。北川, 仁井谷はN.C.Iにて個別会議。

6月11日(金) 9:00 個別会議

14:30 N.C.I職員に化学療法講義 仁井谷, 伊藤

6月12日(土) } フリー

6月13日(日) .....夜日本側打合せ

6月14日(月) ○個別会議

○石戸, 新谷は公衆衛生省にコモル次官を訪問, 医療協力全般について意見交換(鍋木書記官, 宮本所長同行)。

その後Samphran health center 訪問。

6月15日(火) 9:00 個別協議

11:00 ウーマンズホスピタル訪問。

15:00 日本側打合せ。

6月16日(水) 9:00 第2回総合会議

15:00 日本側打合せ

6月17日(木) 9:00 個別会議

14:30 第3回総合会議

6月18日(金) 15:00 討議録に署名

6月19日(土) 7:55 TWA 744 便にて離タイ

#### 4. 議題及び出席者

今回の年次協議における議題は下記の9項目である。(日本側提案, タイ側了承)

6月10日の第1回総合会議で原則的事項を検討合意に達し, 細部は個別会議で協議した。

- 1 病院建設計画
- 2 将来計画
- 3 日本の医療協力
- 4 N.C.I職員の研修について
- 5 病院建設に伴うアドバイザー及び技師の派遣について
- 6 将来計画に伴う予算措置
- 7 実施計画
- 8 情報交換
- 9 1972年度の年次協議開催地

総合会議の出席者

1 日本側

石戸 利貞	国立がんセンター運営部長
伊藤 一二	病棟部長
北川 俊夫	放射線診療部長
仁井谷久暢	生化学検査室医長
新谷 鉄郎	厚生省医務局医事課長
堀田 吉男	海外技術協力事業団医療協力部 職員
宮本 守也	バンコク事務所長
高橋 彰	職員
鍋木 伸一	在タイ日本大使館二等書記官
若宮 祐	在タイ専門家
樋口 宏	外務省経済協力局技術協力課

2. タイ側

Dr. Komoit Pengsritong 公衆衛生省次官  
 Dr. Somchai Somboonchanrent N.C.I 設立所長  
 Dr. Manop Kaewjinda N.C.I 外来部長  
 Dr. Phisit Phanthumachinda N.C.I 放射線部長  
 Dr. Siwalai 細胞部医師  
 Dr. Phatbul Sa-ngobwarchar N.C.I 核医学部長  
 Dr. Sumana Noonpakdel N.C.I 統計部長  
 Mr. Permsah Charbthanorn N.C.I 事務長  
 Mr. Somsak DTEC担当官  
 Miss. Duangchit 厚生省渉外課担当官

## 5 協議の内容

数次にわたる総合会議及び個別会議の結果は、別添討議録、個別討議録のとおりであるが、その概要を以下に述べる。

### (1) 建築計画

7階建治療及び病室部門の建物建築工事は1970年9月25日に開始されており、1972年4月末に内装完了の予定である。(R.D. 2-1)

総床面積は、12,800㎡、総工費18,350,000万円で各階別工事計画は別添付表(資料4)の通りである。

現状について述べると、躯体打ち工事は、1階放射線治療室(リニアアップ室、テレコバルト治療室)に相当する部分を除き、2階までほぼ完了し3階の工事が進行中である。(一部天井のコンクリート打進行中、一部天井鉄骨組込み中、一部床部分型枠作成中)。

1、2階は放射線治療室を除き、隔壁コンクリート打ち、電気配線及び給排水管工事完了。放射線治療室は隔壁コンクリート打ちを完了し、天井部分の鉄骨を組込み中。

Ra室は7月20日にRaをつりあげて搬入した後天井を完成する。2階の完成は7月末となる。

3階は9月中旬完了予定。

4階及び5階は7月に工事にかかり、10月末完了予定。

6階及び7階は9月に工事にかかり、12月末完了予定。

屋上は11月に工事にかかり、1972年2月に完了予定。

内装は、12月から始め、1972年4月に完了予定。

テレコバルト治療装置、リニアック等の搬入、据付けは9月中旬から11月下旬にかけて行なわれ、放射線治療開始可能時期は1972年2月～3月と考えられる。

手術室及び中央材料室関係設備設置は9月から12月末にかけて行なわれる予定。

外来治療は1972年2月から患者の入院は4月から開始されることとなる。

### ○N.C.I.の組織

部長及び副部長のもとに管理、統計、公衆教育、治療、早期がん発見クリニック、臨床検査、及び研究の7部門を置き、さらに各部を5～10の課にわける。

この組織は1971年1月病院建設コンサルティング・チームが説明を受けたものとほとんど同様である。(資料4)

### ○職員数

	医師	薬剤師	技術者	技術助手	看護婦	看護助手
定員	26	2	17	8	24	15
現員	18	2	5	5	5	3

	事務官	M. S. W	統計技術者	会計士秘	書計	
定員	25	1	1	1	1	121
現員	17	1	0	1	1	58

○活動状況

早期がん発見クリニックは1968年12月10日開所以来、漸次外来患者数は増加しつつあり、1970年1年間に1,803名受診し、発見されたがん患者数は67名3.7%であった。

年次	受診者			がん患者		
	男	女	計	男	女	計
1969 (1968 12月 1969 12月)	509	631	1,140	52	37	89 (7.8%)
1970 (1月~12月)	1,171	632	1,803	33	34	67 (3.7%)
1971 (1月~2月)	114	212	326	7	5	12 (3.6%)

(2) 将来計画 (N.C.I. プロジェクトに対する医療協力事業の3年延長について)

N.C.I. プロジェクトに対する日本の医療協力事業5カ年計画は、1972年3月31日をもって終了の予定であるが、N.C.I. の建物の建築工事が完了し、がん患者の入院治療が始まるのは、1972年4月以降であり、タイ側が自力でN.C.I. を運営し得るまでにはさらに約3年間の年月が必要と考えられるのでその間日本の協力を継続してほしいというタイ国の強い要望にこたえ病院完成後その機能を合理的に発揮させるため、N.C.I. プロジェクトに対する協力を1975年3月31日まで続けることを約束した。(R.D 2-2)

(3) 日本の医療協力事業の内容と範囲

1972年4月1日から1975年3月31日までの3年間に日本側が行なう協力事業の形式は器材供与、専門家派遣及びタイ研修員に対するフェローシップの供与の3種類とし、かつその範囲は、日本政府の予算割当の限度内であることを述べタイ側はこれを了承した。(RD2-2)

(4) N.C.I. 職員の研修について

- タイ研修員の日本における研修は、従来から対応する日本の専門家がN.C.I. に派遣されるまでに、完了すべきことになっているが、この原則は今後も固く守られるべきものであることを日本側が強く主張し、タイ側はこれを了承した。(RD 2-3)
- この方式は日本の専門家の現地における指導が能率よく行なわれ、実効をあげるために不可欠な要件であるが、今までタイ側がこの原則に現実であったとは必ずしも言い難いのでこの点に関し、タイ側の配慮を望んだものである。
- タイ側がこの点の配慮に欠ける場合は止むを得ないと考えられる場合を除き、専門家の派遣を延期することもあってよからう。

(5) 病院管理及び建築に関する予定外の専門家・アドバイザー派遣について

- 日本側から病院管理及び建築について、予定外の専門家の派遣が必要になった場合には、適切な専門家・アドバイザー派遣の用意がある旨提案した。
- これは従来にない新しい方式であり以下に述べる如くタイ側（特にDTEC Mr.Somsak）と日本側との間に数点の質疑応答があった後、タイ側はこれを了承した。（RD 2-4）

タイ側 質疑

日本側 回答

人数はどの位か	予定外であるので不明
必要な場合とはどんな場合か	例えばある臨床検査に関し、大きな疑問が生じたというような場合で、両国政府が専門家の派遣、受け入れに同意した場合である
期間はどれ位か	2週間ないし3週間の如く、短期間の場合が多かるう
カウンターパートは必要か	不必要である
要請フォームはどうか	現行のコロンボプランのエキスパート派遣要請フォームによる。従ってA Iフォームが必要である。

(6) 3年延長期間に必要なタイ側の予算措置について

- 日本から供与された器材以外に必要な機材の購入及び保証期間を過ぎた供与機材の維持経費については、タイ側において予算措置を講ずべきことを、日本側が要請し、タイ側はこれを了承した。（RD 2-5）
- また、1972年度から1974年度までの3年間に必要なNCI運営経費の見積りを求めたところ、タイ側から別添付表の如き概算経費が提出された。（資料6）
- この項目は、年次協議派遣団出発前の打合せにおいて外務省から強く要望されたものである。日本が今後3年間にわたり供与すべき器材の実現可能と思われる予算額を約1億8千万円前後と見積ったのであるが、タイ側に対しても、今後の3年間に当然負担すべき経費を算出させ、予算獲得の努力を約束させる必要があるとの考えに基づくものである。
- この項目の検討、特にRD文案作成に際し、タイ側から数点の要望が出され、これをめぐって活発な議論が戦わされた。
- その第一点は、Maintenance cost of the supplied equipment after the guaranteed period というフレーズの中のアンダーライン部分についてである。これは大型の器材については少なくとも1年間の保障がつけられるのが普通であり、その間の修理は日本側が負担すべきだというタイ側の主張により追加されたもので、これに対し日本側には保証のつかない器材もあるのだからこの様な表現はすべて器材に保証期間が必ずあるとの誤解を生むおそれがあるので不適当だとする意見もあったが、常識論としてその

ような誤解は避けられようということで合意に達したものである。

○第二点は、the Necessary equipment other than that supplied by the Government of Japan というフレーズのアンダーライン部分の параグラフの最後に持って来てほしいとタイ側はしつように要望したが、この様な表現にすると修理経費はすべて日本側が負担するのが原則であるかの如き、印象を与えるので不適当と判断し同意することを避けたのである。

○なお、3年延長期間内にタイ側が負担すべき予算額は年度別に算出されていたが、予算案として議会に提出が予定されている1972年度を除いてはごく大まかな見積りにすぎないので30年分の総計を記録にとどめることとした。

#### (7) 実施計画について

1 1971日本会計年度内における、供与機材、専門家研修フェローシップに関するタイ側の要望は、個別会議にて詳細検討の結果、付表の如く決定された。(RD 2-2資料5, 1971年該当項目及び数字)

2 3年延長期間内にプロジェクトを成功裡に完了するために必要な器材、専門家、研修員に関する年度別実施計画を作り、その実行に必要な予算及び人員の確保について双方努力することとした。(RD 2-2資料5の内1972～1974に関する項目及び数字、並びに資料6)

1972年度から1974年度に至る各年度別、機材、専門家、研修員に関する細部は、双方の努力目標であり、個別会議において検討決定されたものである。

#### (8) 情報交換

○本プロジェクトを効率的に実施するため、緊密な情報交換を行なうことになった。(RD 2-7)

○この事項は従来からとりきめられていたことであるが、組織的に行なわれていたとはいえない。

そこでその方式を次の如く定めた。

1. 月1回定期的に情報交換を行なうこと。

2. 窓口：タイ側はChief of Administration Dept.

N.C.I. (現在はMr. Permsak), 日本側はChief of Planning Section, N.C.C. (現在はDr. Tanaka)とする。

3 交換すべき情報の種類は、N.C.I. プロジェクトの進行状況、特に建築工事進捗状況、N.C.I. 運営状況その他協力に関し、必要な事項とする。なお、タイ側からは病院完成後もがん化学療法ならびに放射線療法に関する参考事項を継続的に提供してほしい、との希望が述べられた。



4. タイ側の提供する情報は、Dr. Somchaiの監督のもとに、公衆衛生省、DTEC、及びOTCA Bangkokにも提出する。

日本側においても然るべき関係方面に対し配慮する。

(9) 1972年の年次協議開催地について

タイ公衆衛生省次官、Dr. Komol から特に発見あり、明年は病院完成の年であるので日本側の多くの人に完成された病院の姿を見てもらいたいが、年次協議は、タイ、日本両国間で交互に開催することになっているので、東京を希望するとの意向が表明された。また、Dr. Somchai は日本側が日本に出かけて、多くの関係者に病院完成を報告し、感謝の意を現わしたいと思っていると述べた。

このようなタイ側の強い希望にかんがみ明年の年次協議は東京において開催することに決定した。(RD2-8)

時期については、病院完成後、双方の都合のよい時期を選ぶこととされた。

(10) 参考事項及び問題点

A. 機材供与に関すること。

- ① 今後の機材供与は、少なくとも1972年、1973年度の2年間の内に完了すべきこと。

今後3年間に2億円近い機材供与が行なわれることとなろうが、止むを得ない理由による次年度へのずれこみ、あるいは現地到着後における機材の不調等の事態が起らないとも限らないことを考えるし、1974年度に相当な機材供与がなされた場合には、その分について1975年度に日本側専門家を派遣せざるを得ないかも知れず、したがって、1974年度をもって本プロジェクトを完了し得なくなるおそれがある。

N. C. I. 運営をなるべく速やかに軌道に乗せるためにもできるだけ短年月に機材供与を終え、タイ関係者がそれら機材を使いこなせるようにすべきである。

- ② 供与機材には英文説明書をつけるべきこと。

英文説明書が欠けているため、操作できず、使用されずに陳列されている機械が相当見受けられる。今後は、詳細な英文使用説明書を必ず添付すべきである。さもないと、日本に対する不信を招くことになろう。

- ③ 保証関係書類を必ず添付すべきこと。

保証の有無、期間、条件等を明記した文書を必ず添付すべきである。タイ側はすべての機材は1年間の保証期間があるものと思っているふしがあり、保証関係事項を明らかにしておかないと、後日、なくもがなのトラブルを起こすこととなる。例えば某社の大型機器の保証期間は作動開始後1年であるが、他社の別種の大型機器の保証期間は船積み後1年間であり、引渡し後病院完成の遅れのため据付けられないまま、保証期間が過ぎ去ろうとしているが、保証関係書類が添付されていないため、この事実に対する認識

がタイ側に欠けているようである。

なお、保証期間については、作動開始後とするのが当然のように思われる。

- ④ 機材購入契約にあたっては、タイ国内に出先又は代理店を有するメーカーのものを選定すべきこと。

供与機材特に医療機器に故障が起きた場合、タイ人独力による修理はまず不可能と考えてよい。また、その故障又は不調が不可抗力によるもの、又は取扱い上のミスによるものであっても、機器自体に弱点があるためと考えがちで、修理依頼に迅速に応じないと、日本品に対する不信感を招くおそれがある。

現に、N.C.I. 近くのWomens Hospitalを視察したさい、シーメンスの放射線機器は、据付以来一度も故障がないのに、日本の某社の放射線治療装置は、据付後すぐ故障し、しかもなかなか修理に来てくれないという不満を聞いた。もっとも故障のまま数年間放置されているシーメンス製の装置もあったので外国製品にありがちな悩みであろうと思われるが、機種、銘柄の選定にあたっては、タイ国事情を十分考慮し、アフターサービス及び修理に責任を持つことを条件にして、タイ国内に出先又はエージェンシーのあるメーカーの製品を選定し、契約すべきである。

- ⑤ 供与機材について、発送されたかどうか、バンコクに到着したかどうか、N.C.I. に搬入されたかどうか、を正確にチェックする方法を確立すること。又、予備部品を含め保管責任者と保管場所を明らかにしておくこと。

これは、まだN.C.I. に到着していないと言われていた乳腺撮影装置の一部が、外科機械の中にまぎれこんでいることが、今回北川部長により発見された事実からの教訓である。

## B. 専門家に関すること

国立がんセンターから派遣不能な専門分野については、他の機関から派遣できるよう手はずを整えておくこと。

例えば、1973年度に派遣要請のある血液銀行分野の医師、技術者の如きものについては早目に検討を進めておくことが必要である。

## C. 協議日数について

専門分野別個別会議、その英文記録の作成、印刷、討議録本文並びに資料の作成、点検修正、印刷等に予想より多くの時間が食われること、N.C.I. 関係者は勿論、N.C.I. 以外の医療関係者との意見交換が必要であること（今回は必ずしも十分でなかった。）。

予想せぬ事態の処理のため予備日が必要であることを考えると今回の13日はギリギリで、15日はどうしても必要であろう。



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RECORD OF DISCUSSION  
BETWEEN THE JAPANESE ANNUAL CONSULTATION MISSION  
AND THE THAI AUTHORITIES CONCERNED  
ON THE NATIONAL CANCER INSTITUTE PROJECT OF THAILAND

Preamble

The Japanese Annual Consultation Mission for 1971, headed by Dr. Toshisada Ishido, Director of Administration Department of the National Cancer Center, Tokyo, Japan, visited Thailand from 7 to 19 June 1971, and exchanged views with the Thai authorities concerned on the future program of Japanese medical cooperation to the Thai National Cancer Institute.

The Japanese Mission expressed its thanks for the hospitality and cooperation extended by the Government of Thailand and the authorities concerned.

For the purpose of successful completion of the Project, Both Parties agreed that the cooperation should be extended for further three years after the end of the five year program of the cooperation, i. e. , until March 31, 1975, in accordance with the laws and regulations in force in the two countries. Both Parties agreed to the Record of Discussion as follows which was signed by Dr. Komol Pengsritong, Under-Secretary of State for Public Health of Thailand, and Dr. Toshisada Ishido, Director of Administration Department of the National Cancer Center, Tokyo, Japan.

1. Review of the Activities of the Institute:

1-1. Thai Activities:

With the implementation of the five-year program of the Thai National Cancer Institute Project since 1966, the Early Cancer Detection Service has started and Department of Radiology, Endoscopy, Clinical Laboratories, Statistics, Pharmacy and Administration have been established.

The number of out-patients has been increasing and the Clinic is very actively engaged in services. The hospital attached to the Institute under construction since September 1970, will serve as a center for the cancer control in Thailand.

1-2. Japanese Co-operation:

Since the beginning of cooperation rendered to the Thai National Cancer Institute until March 1971, the Government of Japan has provided medical equipment and materials valued at approximately US\$ 546,000 (¥197,000,000) (Appendix 1). In order to advise and train Thai staff in mastering the techniques and the use of equipment, sixty-four Japanese experts have been dispatched to the Institute (Appendix 2).

Twenty two fellowships were also awarded to Thai physicians, technicians and nurses of the Institute for training at the National Cancer Center, Tokyo, Japan (Appendix 3).

2. Future Plan:

2-1. Thai Activities:

It is confirmed that the construction of the Cancer Hospital started in September 1970, (total cost: 18,350,000 BAHT, seven stories building, total floor space: 12,800 m<sup>2</sup>) will be completed in April 1972. In this regard, construction schedule of the hospital, its organization and activities were approved by Both Parties. (Appendix 4).

2-2. Japanese Co-operation:

To make the function of the hospital fully operative, the Japanese side will continue to cooperate in the form of providing equipment, dispatching experts and granting fellowships for training Thai personnel in Japan within the limit of budgetary allocation of the Japanese Government.

The Japanese side accepted the request of the Thai side to provide equipment, experts and fellowships in 1971 Japanese fiscal year (Appendix 5).

2-3. The Thai side will continue to follow the present way so that Thai personnel should complete their training at National Cancer Center, Tokyo, Japan, prior to the assignment of the corresponding Japanese experts at the Thai National Cancer Institute.

2-4. The Thai side accepted the Japanese Mission's proposal to provide experts/advisors for hospital management and construction, if necessary.

2-5. It is confirmed that the Thai side will take budgetary steps to provide the necessary equipment other than that supplied by the Government of Japan and to cover the maintenance cost of the supplied equipment after the guarantee period.

2-6. Both Parties agreed to endeavor to take budgetary steps including recruitment of personnel in order to complete the Project successfully within the extended period of three years according to the working plan attached herewith (Appendix 5, 1972 - 1974; and Appendix 6).

2-7. Both Parties agreed to have close exchange of information in order to implement the Project effectively.

2-8. Both Parties agreed that the Annual Consultation Meeting on this Project for the year 1972 will be held in Tokyo, Japan.

Commitments in this Record of Discussion are to be approved by the respective authorities concerned.

Bangkok, June 18, 1971.

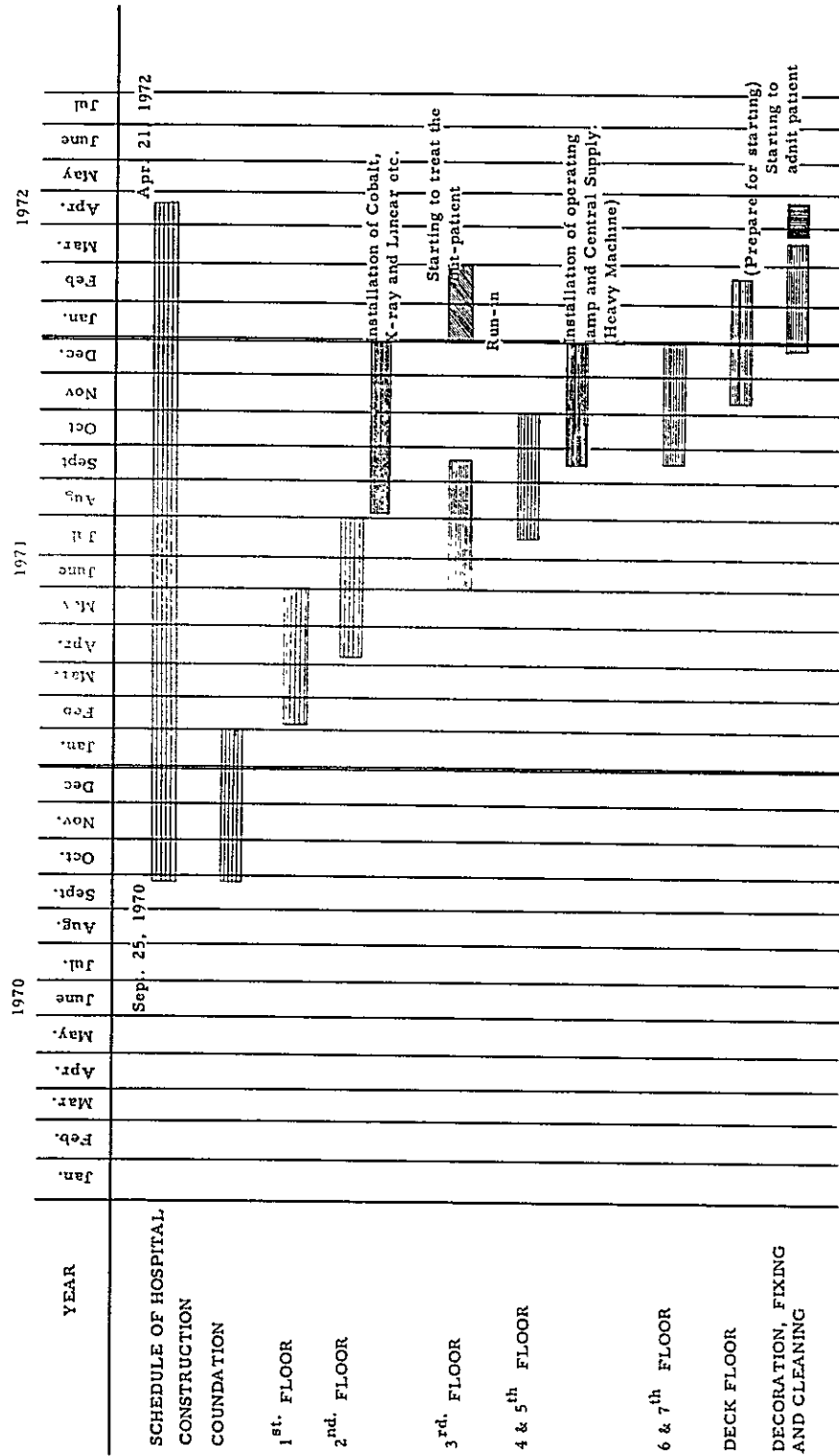
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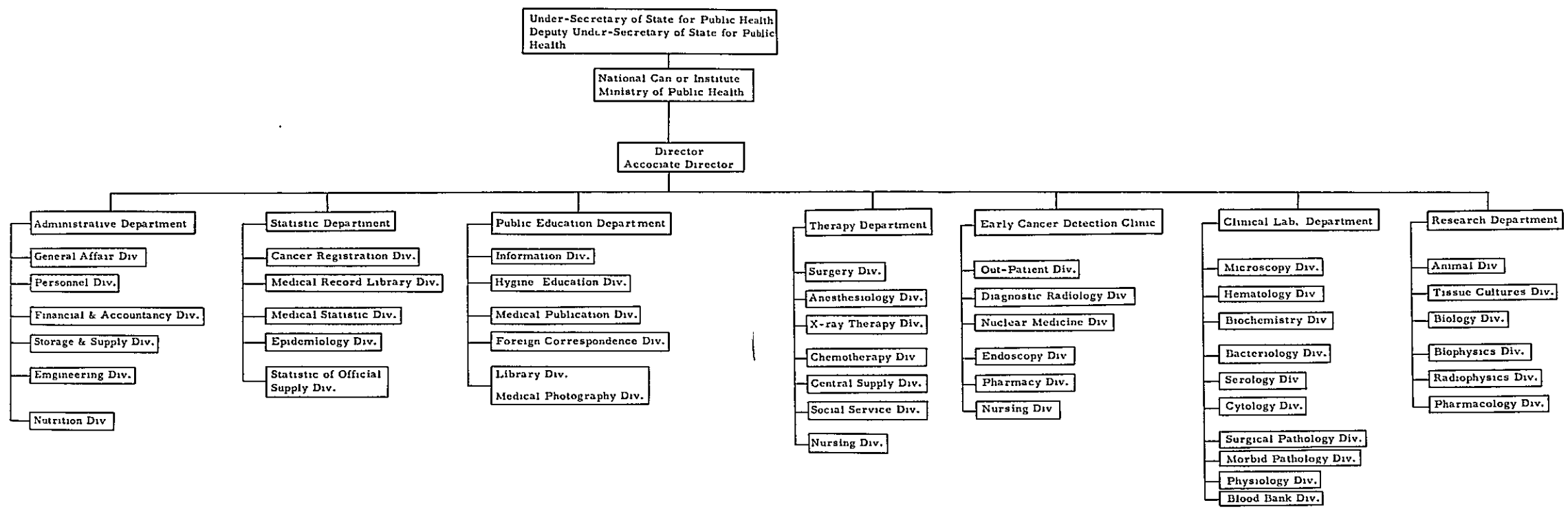
Dr. Toshisada Ishido  
Director of Administration  
Department, National Cancer Center,  
Japan, Head of the Japanese Mission

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Dr. Komol Pengsritong  
Under-Secretary of State for Public  
Health, Thailand









APPENDIX 1  
Medical Instrument Provided for Thai National Cancer Institute

I.	Radiology Department	(Purchase Price)	Number of Item
1-1	Radiology Diagnosis		
	Division X-ray unit, Automatic processor	US\$ 158,977.33	78
	X-ray TV	US\$ 158,977. <u>33</u>	78
1-2	Radiotherapy Division		
	Cobalt 60, Simulator, Radium Safe	132,855. <u>55</u>	7
II.	Nuclear Medicine Department		
	Scintiscanner, Survey- meter	39,892. <u>52</u>	45
III.	Clinical Laboratory Department		
	Microscope, Shield Room, including "Liver Cancer Project"	108,013. <u>97</u>	464
IV.	Endoscopy Department		
	Gastro-camera, Gastro- fiberscope	21,463. <u>02</u>	44
V.	Surgery Department		
	Operation Lamps, Auto- clave	34,066. <u>66</u>	4
VI.	Administration Department		
	(Audio-visual Aids, Sta- tion Wagon, English Refer- ence Books)	10,404. <u>70</u>	53
		Total	595
		US\$ 504,673. <u>75</u>	
		Transportation Fare	19,433. <u>24</u>
		(Freight & Insurance)	
		Grand Total	524,107 C. I. F. Bangkok

APPENDIX 2  
LIST OF JAPANESE MEDICAL EXPERT IN THAILAND  
(Under The Colombo Plan Scheme)

No.	Name of Expert (The First Survey Mission)	Speciality	Period	Post of Expert (Present Post)
1.	Dr. Sadanao Sagara		15 days July 5 - July 19, '67	Director of Administration Department, National Cancer Center (Acting Director, Japan Cancer Society)
2.	Dr. Mitsufusa Yoshimi		- do -	Deputy-Chief, National Hospital Section, Medical Affairs Bureau (Medical Officer, Ministry of Education)
3.	Mr. Hideo Ono (1968 Japanese Fiscal Year) (The Second Mission)		- do -	Medical Cooperation Department, OTCA
4.	Dr. Soroku Yamagata	Administration	15 days May 28 - June 12, '68	Director of Administration Department, NCC (Director of Health Department, Chiba Prefectural Office)
5.	Dr. Takao Sakita	Endoscopy	- do -	Chief of Out-Patient Division, National Cancer Center Hospital
6.	Dr. Kiyoyuki Kimura	Clinical Laboratory	- do -	Chief of Clinical Laboratory Division, NCC (Associate Director of National Cancer Center Hospital)
7.	Dr. Yoichiro Umegaki	Radiology	15 days June 9 - June 23, '68	Chief of Radiology Division, NCC (Head of Clinical Research Div. National Institute of Radiological Sciences)
8.	Dr. Toshiro Ogata	Surgery	- do -	Chief of Health Consultation Room, NCC
9.	Mr. Zen Yamaguchi	Installation of X-ray Units	2 months June 18 - Aug. 16, '68	Toshiba Nuclconics Co., Ltd.
10.	Mr. Morimasa Goto	- do -	- do -	Shimazu Co. Ltd.
11.	Mr. Shoji Naito	- do -	46 days July 2 - Aug. 16, '68	Hitachi X-ray Co. Ltd.
12.	Mr. Toichi Sato	Installation of Automatic Processing Machine	1 month Nov. 19 - Dec. 18, '68	Konishiroku Photo Co., Ltd.
13.	Dr. Yoichiro Umegaki	Supervisor	1 month Nov. 19 - Dec. 18, '68	Chief of Radiology Division, NCC
14.	Dr. Kazuo Date	Administration	6 months Nov. 19 - May 17, '69	Head of Planning Office, Administration Dept. NCC
15.	(*) Technician & Engineer for Installation of Instruments Mr. Yukumoto Fukuoka	Clinical Laboratory	1 month Nov. 19 - Dec. 18, '68	Chief of Clinical Laboratory Technician, NCC
*16.	Mr. Kaoru Sato	Installation of X-ray TV Unit	1 month Nov. 27 - Dec. 26, '68	Toshiba Nuclconics Co. Ltd.
*17.	Mr. Zen Yamaguchi	- do -	- do -	- do -

<u>No.</u>	<u>Name of Expert</u>	<u>Speciality</u>	<u>Period</u>	<u>Post of Expert (Present Post)</u>
*18.	Dr. Etaka Tsuboi	Radiology (Chest)	3 months Dec. 3 - Mar. 1, '69	Chief of the First Ward Section, In-Patient Division, NCC (Physician, Tsuboi Clinic, Koriyama, Fukushima Pref.)
19.	Dr. Yukihisa Fukutomi	Gastro endoscopy	3 months Dec. 3, '68-March 1, '69	Chief, NCC
20	Mr. Tadatoshi Shimano	Radiology	7 months Dec. 3, '68 - July 2, '69	Chief X-ray Technician, Radiology Division, NCC
21.	Mr. Yasuhisa Saito	Radiology	3.5 months Dec. 3, '68 - Mar. 16 '69	X-ray Technician, Radiology Division, NCC
22.	Dr. Masaru Kuru	Medical Cooperation	7 days Dec. 5 - Dec. 11, '68	President of National Cancer Center
23.	Dr. Hisanobu Nutani	Clinical Pathology	3 months Dec. 17, '68 - Mar. 16, '69	Chief of Biochemistry Laboratory, Clinical Lab. Div. NCC
24.	Dr. Yoichiro Umegaki	Supervisor	11 days Feb. 26 - Mar. 8, '68	Chief of Radiology Dept. NCC (Head of Clinical Research Division, NIRS)
25.	Dr. Tatsuya Yamada	Radiology (Stomach)	3 months Feb. 26, '69 - May 25, '69	Chief of Radiology Section, Radiology Div. NCC
26.	Dr. Takeshi Miwa	Castro-endoscopy	3 months Feb. 26, '69 - May 25, '69	Medical Officer, In-patient Div. NCC
27	Mr. Kuntoshi Moroe	Hospital Management	1 year Feb. 26, '69 - Mar. 17, '70	Planning Office, Administration Dept. NCC
28.	Dr. Tatsu Mukojima	Clinical Pathology (Bacteriology & Immunology)	3 months Mar. 12 - Apr. 9 & May 1 - June 30, '69	Medical Officer, Bacteriology & Immunology Lab. Clinical Lab Div. NCC
29.	(1969 Fiscal Year) Dr. Hisao Sakakibara	Administration	6 months June 10 - Dec. 16, '69	Chief of Library, Administration Dept. NCC
30.	Mr. Katsuhiko Takasaki	Radiology (Nuclear Medicine)	6 months June 10, 1969	X-ray Technician, Radiology Section 3 (Isotope), Radiology Div. NCC
*31.	Mr. Morimasa Goto	Installation of Nuclear Medicine Unit	48 days Aug. 13 - Oct. 2, '69	Shimazu Co. Ltd.

No.	Name of Expert	Specialty	Period	Post of Expert (Present Post)
32.	Mr. Hiromi Fujiwara	Repairing of X-ray TV Unit	20 days Sept. 20 - Oct. 17, '69	Toshuba Nuclideanics Co., Ltd.
33.	Dr. Sachio Takasu	Gastro-Endoscopy	3 months Oct. 17, '69 - Jan. 16, '70	Chief of Chief of Gastrointestinal Clinic, Out-Patient Div. NCC
34.	(The Third Mission) Dr. Hiroshi Konishi	Administration	15 days Nov. 5 - Nov. 19, 1969	Director of Administration Dept., NCC (Concurrently Director of Health Dept. Health Department, Kanagawa Prefectural Office)
35.	Dr. Yoichiro Umegaki	Supervisor	- do -	Chief of Radiology Division, NCC
36.	Dr. Ichiji Ito	Surgery	- do -	Chief of In-patient Division, NCC
37.	Mr. Hideo Ono	Coordinator	- do -	Staff Member of Medical Cooperation Office, OTCA
38.	Mr. Takashi Uchiyama	Design of Cancer Hospital - Architecture	22 days Nov. 5 - Nov. 26, '69	Deputy Chief, Supply and Equipment Section of Medical Affairs Bureau, Ministry of Health & Welfare
39.	Mr. Goro Iwamoto	Design of Cancer Hospital - Electricity	- do -	Technical Officer, Supply and Equipment Section of Medical Affairs Bureau, Ministry of Health & Welfare
40.	Mr. Fumio Katayama	Radiology	3 months Nov. 25, '69 - Mar. 14, '70	Chief X-ray Technician, Radiology Division, NCC
41.	Dr. Ryu Nakayama	Physiology	3 months Dec. 4 '69 - Mar. 14 '70	Medical Officer, Physiology Laboratory, Clinical Laboratory Division, NCC
*42.	Mr. Haruo Inada	Installation of Shield Room	22 days Dec. 4 - Dec. 25 '69	Chief of Design Division, Maruko Co., Ltd.
43.	Dr. Nobu Hattori	Preliminary Survey of Liver Cancer	15 days Feb. 24 - Mar. 10 '69	Chief of Ward 8 In-patient Division, NCC (Chief of Clinical Laboratory Division, NCC)
44.	Dr. Eitake Tsuboi	- do -	- do -	Chief of Ward 1, In-patient Division, NCC (Physician, Tsuboi Clinic, Koriyama City)
45.	Mr. Katsuhiko Takasaki	Radiology	4 months Mar. 3 - June 22 '70	X-ray Technician, Radiology Section 3 (Isotope) Radiology Division, NCC
46.	Dr. Yasunobu Sakai	Clinical Laboratory (Hematology)	3 months Mar. 9 - June 8 '70	Chief of Hematology Laboratory, Clinical Laboratory Division, NCC

No.	Name of Experts (1970 Fiscal Year)	Specialty	Period	Post of Expert (Present Post)
47.	Mr. Yukitoshi Kumura	Radiology	6 months Jun. 9 - Dec. 8 '70	X-ray Technician, Radiology Division, NCC
48.	Mr. Kunitoshi Moroe	Hospital Management (Coordinator)	6 months Jul. 10 - Jan. 9 '71	Planning Office, Administration Dept., NCC
49.	Mr. Takashi Suzuki	Clinical Laboratory (Biochemistry)	6 months Jul. 14 '70 - Jan. 13 '71	Assistant, Public Health Division, Kitazato Univ.
50.	Dr. Nobu Hattori	Liver Cancer Surgery (Internal Medicine)	38 days Jul. 14 - Aug. 20 '70	Chief of Ward 8, Clinical Laboratory Division, NCC
51.	Dr. Hisanobu Nitani	Liver Cancer Surgery (Biochemistry)	1 month Jul. 21 - Aug. 20 '70	Chief of Biochemistry Laboratory Section, Clinical Laboratory Division, NCC
52.	Mr. Tatsuhiro Miya	Liver Cancer Surgery (Biochemistry)	1 month Jul. 21 - Aug. 20 '70	Laboratory Technician, Clinical Laboratory Division, NCC
53.	Dr. Hiroto Matsue	Radiology	3 months Jul. 21 - Oct. 20 '70	Medical Officer, Radiology Division, NCC
54.	Dr. Toshiji Kobayashi	Clinical Pathology (Physiology)	3 months Oct. 3 '70 - Jan. 5 '71	Physician, Physiology Laboratory, Clinical Laboratory Division, NCC
55.	Dr. Hanao Oguro	Gastro Endoscopy	3 months Jan. 17 - Apr. 19 '71	Chief of Gastrointestinal Clinic, Out-patient Division, NCC
56.	Mr. Yutaka Wakamiya	Radiology	6 months Jan. 17 - June 16, '71	X-ray Technician, Radiology Division, NCC
57.	(Consulting Team on Construction of National Cancer Institute Hospital) Dr. Yoichiro Umegaki	Supervisor	15 days Jan. 17 - Jan. 31 '71	Chief of Radiology Division, NCC
58.	Dr. Ichiji Ito	Surgery	- do -	Chief of In-patient Division, NCC
59.	Mr. Ken Matsumoto	Radiology	- do -	X-ray Technician, Radiology Section 2 (Therapy) Radiology Division, NCC
60.	Mr. Yoshitsugu Kudo	Installation Plan of Cobalt & Simulator	- do -	Toshiba Electric Co., Ltd.
61.	Mr. Eiyasu Maehara	Linear Accelerator	- do -	Nippon Electric Co., Ltd.
62.	Mr. Kenkichi Hama	Medical Instrument for Cancer Hospital	- do -	Director, Hama Medical Instruments Co., Ltd.
63.	Dr. Shichiro Ishikawa	Medical Cooperation	10 days Feb. 2 - Feb. 11 '71	Director of National Cancer Center Hospital
*64.	Mr. Shigemasa Nakunishi	Installation of Nuclear Medical Unit	10 days Mar. 12 - Mar. 20 '71	Shimazu Seisakusho Co., Ltd.

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APPENDIX 3  
THE LIST OF THAI PARTICIPANTS ON CANCER PROGRAMME

No.	Name of Participant	Training Subject	Training Organization	45 days	Training Period	Post of Participant
1.	Dr. Somchai Sombooncharoen	Cancer Research & Hospital Management	National Cancer Center	45 days	Nov. 16, 1963 -	Chief of Early Cancer Detection Clinic Women's Hospital, Ministry of Public Health
2.	Dr. Somchai Sombooncharoen	Foundation of Cancer Institute	Hospital Management Institute & NCC	2 months	Aug. 3, 1965 Oct. 1, 1965	Secretary of the Administrative Committee of the Thai National Cancer Institute
3.	Mr. Praphorn Charuchandr	- do -	- do -	1 month	Aug. 3, 1965 Oct. 2, 1965	Deputy Chief, Sanitary Engineering Div., Health Dept., MPH
4.	Mrs. Kaisri Tunrri	- do -	- do -	- do -	- do -	Chief of Architectural Section, Sanitary Engineering Div., Health Dept. MPH
5.	Mr. Pemsak Charbthanom	Management of Cancer Hospital	NCC, Aichi Cancer Center	4 months	Feb. 15, 1967 June 15, 1967	Senior Administrative Staff of International Health Div. MPH
6.	Dr. Chitt Hemachuda	Discussion on the Cooperation Scheme of the Thai National Cancer Institute	National Cancer Center	15 days	Mar. 11, 1968 Mar. 25, 1968	Deputy Under-Secretary of State for Public Health
7.	Dr. Somchai Sombooncharoen	Project & Inspection of Cancer Institutes	Aichi Cancer Center			
8.	Dr. Tongpoon Watanavit					
9.	Mr. Pemsak Charbthanom					
10.	Mr. Praphorn Charchnor	Designing Cancer Hospital	Supply & Division Ministry of Health & Welfare	14 days	Aug. 10, 1968 Aug. 23, 1968	Sanitary Engineering Division, Health Dept. MPH
11.	Mrs. Kaisri Tunrri	Designing Cancer Hospital	Supply & Division Ministry of Health & Welfare	14 days	Aug. 10, 1968 Aug. 23, 1968	Chief of Architectural Section Sanitary Engineering Div. MPH
12.	Dr. Prapont Piyaret	Clinical Pathology	National Cancer	3 months	Aug. 10, 1968 Nov. 9, 1968	Chief, Dept. of Clinical Laboratory, National Cancer Institute
13.	Mr. Suparn Borisut	Laboratory Technician	- do -	4 months	Aug. 10, 1968 Dec. 7, 1968	Laboratory Technician, National Cancer Institute
14.	Mr. Suwat Dangphibulsakul	X-ray Technician	- do -	4 months	- do -	X-ray Technician National Cancer Institute
15.	Miss Arunce Chottronapat	- do -	- do -	- do -	- do -	X-ray Technician, NCI
16.	Dr. Phisit Pharthumachunda	Radiology	- do -	3 months	Aug. 26, 1968 Nov. 25, 1968	Chief, Radiology Dept. NCI
17.	Dr. Phisit Phanthumachunda	Radiology & Consultation of Cobalt Unit	- do -	2 weeks		

<u>No.</u>	<u>Name of Participant</u>	<u>Training Subject</u>	<u>Training Organization</u>	<u>Training Period</u>	<u>Post of Participant</u>
17.	Dr. Phisit Phanthumachinda	Radiology & Consultation of Cobalt Unit	- do -	2 weeks Oct. 5, 1969 Oct. 19, 1969	Chief, Radiology Dept. NCI
18.	Mrs. Prakong Rungkasiri	Nursing	- do -	6 months Nov. 25, 1969 May 19, 1970	Chief Nurse, NCI
19.	Miss Ladaratana Phutprasert	Nursing & Gastro Endoscopy	- do -	3 months Feb. 15, 1970 May, 19, 1970	Nurse, NCI
20.	Dr. (Mrs.) Sumana Nunpakdee	Cancer Statistics	NCC, Dept. of Statistics, Ministry of Health & Welfare	2 months Oct. 12, 1970	Statistic Dept. NCI
21.	Dr. Phairaj Athanavams	Clinical Laboratory	NCC	6 months Oct. 12, 1970	Physician, Microbiology Section Clinical Laboratory Dept. NCI
22.	Mr. Chitt Unkeeres	Electric Technician	NCC & X-ray Machine	1 year Oct. 12, 1970	Electric Technician, NCI

The list of Experts, Fellowships and Equipment will be provided by the Japanese Government.

Table I. Experts

Table I. Experts

<u>Field of Experts</u>	<u>Duration</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>
1. <u>Therapy Department</u>					
2. <u>Surgery Division</u>					
Surgeon	3 months				

APPENDIA 4

1. Schedule of Hospital Construction and Activities of the Hospital: - Radiotherapy  
- Other cancer treatment.
2. Organization chart of National Cancer Institute.

APPENDIX 5

The list of Experts, Fellowships and Equipment will be provided by the Japanese Government.

Table I. Experts

Field of Experts	Duration	1971	1972	1973	1974
<b>1. <u>Therapy Department</u></b>					
<b>a. <u>Surgery Division</u></b>					
Surgeon	3 months			2	2
Surgeon	2 "	1		-	
Anesthesiologist	3 months each		2	2	2
Surgical Nurse	6 months		1	1	1
			if 2 for 3 months each	"	"
Total		1	5	5	5
<b>b. <u>X-ray Therapy Division</u></b>					
Radiotherapist	3-6 months	1	1	1	1
Radiotherapy (Technician)	6 months	2	2	2	2
Engineer for yearly maintenance of linac machine	2 weeks	2	2	2	2
Engineer for maintenance of Cobalt 60 and diagnostic units	3 weeks		2	2	2
Total		3	5	7	7
<b>c. <u>Chemotherapy Division</u></b>					
Chemotherapist	3-6 months		1	1	1
Total			1	1	1
<b>2. <u>Early Cancer Detection Clinic</u></b>					

Field of Experts	Duration	1971	1972	1973	1974
a. <u>Nuclear Medicine Div.</u>					
Nuclear medicine	1 month		1		
Total			1		
b. <u>Liver Cancer Project</u>					
Phusician			1		
Technician			1		
Total			2		
3. <u>Clinical Laboratory Division</u>					
Histotechnician	3-6 months		1		
Pathologist	3-6 months		1		
Bacteriologist	3-6 months				
Physician (Blood Bank)	3-6 months			1	
Technician (Blood Bank)	3-6 months			1	
Physician (Tissue Culture)	3-6 months			1	
Technician (Tissue Culture)	3-6 months				1
Total		2	2	4	
Trand Total		4	16	17	12

Table II. Fellowships

Field of Training	Duration	1971	1972	1973	1974
<b>1. <u>Therapy Department</u></b>					
<b>a. <u>Surgery Division</u></b>					
Gynecology	6 months	1			
Anesthesiology	6 "	1			
Social Worker	1 month		1		
Surgery	2 months		1		
Surgical Nurse	6 "		1		
Central Supply Nurse	3 "		1		
Total		2	4		
<b>b. <u>X-ray Therapy Division</u></b>					
Radiotherapist	6 months		1	1	1
Radio-Therapy Technician (r yrs. Edu.)	6 "		1	1	1
Radio-Therapy Technician (2 yrs. Edu.)	1 year		1	2	2
Registered Nurse	6 months		1	1	1
Total			4	5	5
<b>c. <u>Chemotherapy Division</u></b>					
Chemotherapy	6 months or 1 year	1			1
Total		1			1
<b>2. <u>Early Cancer Detection Clinic</u></b>					
<b><u>Nuclear Medicine Division</u></b>					
Nuclear Medicine Nurse	2 months	1			
	6 "	1			
Total		2			
<b>3. <u>Clinical Laboratory</u></b>					
Surgical Pathology (Physician)	3-6 months	1	1		
Cytology (Technician)	6-12 months		1	1	
Bacteriology (Technician)	6-12 months		1		
Pathology (Technician)	6-12 months			1	
Hematology (Technician)	6-12 months			1	
Total			3	3	
Grand Total		15	11	8	6

Table III. Equipment Therapy Department Surgery Division

Description of Equipment		1971	1972-1974
1.	Operating lamp (for Dome)	1	0
2.	Operating table	4	0 3
3.	Electrosurgical unit	4	0
4.	X-ray machine (Image intensifying mobile)	1	0
5.	Mobile suction unit	4	
6.	Cardioscope	2	
7.	Oxygen tent	4	
8.	Respirator (with IPPB - Mark 4 + 7 (Each)	1	
	- Mark 8	3	
9.	Pace maker	1	
10.	Anesthetic machine	4	
11.	Laryngoscope	5	
12.	Endotracheal tube	6 doz.	
13.	Infusion pump (portable)	2	
14.	Suction and nebulizer unit	3	
15.	Continuous low pressure suction unit	5	
16.	Outlet apparatus of oxygen	4	
17.	Outlet apparatus of suction	4	
18.	Gastrectomy instrument set	1	
19.	Esophagectomy instrument set	1	
20.	Lobectomy instrument set	1	
21.	Maxillary sinus operation set	1	
22.	Hysterectomy instrument set	1	
23.	Urinary bladder operation set	2	
24.	Cooler	2	
25.	Anesthetic apparatus	2	
26.	Irrigation stand	2	
27.	Complementing table		
	- Large	2	
	- Small	4	
28.	Double table Sterilizing tray set	2	
29.	Triple table Sterilizing tray set	2	
30.	Working table	4	
31.	Cart for carrying the apparatus	2	
32.	Ice box (for specimen)	2	
33.	Instrument cabinet	3	
<u>A. Operating Room</u>			
1. <u>Several operation instrument</u>			
	Radical esophagectomy (Laparotomy)		1 set
	Rectal amputation		1 set
	Breast amputation		1 set
	Nepharectomy instrument		1 set
	Kuntscher intramedullary nailing instrument		1 set
	Upper or lower extremity amputation		1 set

Description of Equipment	1971	1972-1974
Laminectomy (special cord) operating instrument		1 set
Craniotomy instrument		1 set
Cone resection operating instrument		1 set
Paranasal sinus operating instrument		1 set
Laryngectomy (the pharynx) instrument		1 set
Struma operating instrument		1 set
Jaw and tonque resection operating instrument		1 set
Cystectomy and artificial vesicular replacement instrument		1 set
Ureterostomy operation instrument		1 set
Prostatectomy operation instrument		1 set
Nakayama's blood vessel suture instrument		1 set
2. <u>Surgical endoscope</u>		
Colofiberscope		1 set
Bronchofibroscope		1 set
Peritoncoscope (Laparoscope) with automatic pneumoperitoneum set		1 set
Cystoscope complete set for uretrcric catheterization and electric cauterization		1 set
Choledocho-fibroscope		1 set
3. <u>Others</u>		
Irrigator stand		6
Double table		2
Complementing table		
- Large		2
- Small		4
Cart for carrying apparatus		3
Instrument cabinet		12
Working table		8
Ice box		3
Suction Unit		4
Kick bucket rack		10
Bucket		10
Linen cabinet		10
Brush sterilizer container		10
Plaster cart		1
Plaster cutter		1
Balance (for measuring hemorrhage)		5
Surgical stop watch		5
B. <u>Anesthesia</u>		
Infant circle		2



Description of Equipment	1971	1972-1974
Nultichannel type of E. K. G.		2
Tube connector		12
Air way (various size)		12
Table		5
Others		
<b>C. <u>Recovery Room</u></b>		
1. <u>Bed</u>		5 sets
2. <u>Travelling system spotlight</u>		1 set
3. <u>Others</u>		
Oxygen tent		1 set
Electric clinical Thermometer		2 sets
Instrument table		1 set
Suction bottle (Incase there is piping)		5 bottles
Oxymeter		1 set
<b>D. <u>Central Supply</u></b>		
1. Needle washer		2 sets
2. Various tray to set		in sets
3. Other		
Nebulizer		7 sets
Wheel stretcher		5 sets
Seal machine		1 set

Radiation Therapy Division

Description of Equipment	1971	1972	1973	1974
1. Linac 13 or 15 Mev.				
2. Cobalt 6, 500 Rhm.				
3. Lead shield for radium ward	8 sets			
4. Flatness recorder	1			
5. Film scanner			1	
6. Mobile radium container	1			
7. Fluoroluminescence dosimeter			1	
8. Nasopharyngofiberscope				1
9. 500 Ma. Uro - X-ray unit		1		
10. Orthopantomographic unit				1
11. Lathe	1			
12. Milling machine	1			
13. Body phantom				1
14. 100 - 250 KVP X-ray therapy machine		1		
15. Transverse tomography unit		1		
16. Controlled temperature X-ray processing tank		1		

Chemotherapy Division

Description of Equipment	1971		1972-1974	
1. Bleomycine	20x6x15	mg.	20x6x15	mg. x 3yrs.
2. Mitomycine C.	20x8x10	mg.	40x8x10	mg. x 3yrs.
3. 5 - FU	10x8x500	mg.	10x8x500	mg. x 3yrs.
4. Cyclophosphamide	20x10x100	mg.	40x10x100	mg. x 3yrs.
5. Vincristine	20x10x1	mg.	30x10x1	mg. x 3yrs.
6. Vinblastine	10x10x5	mg.	10x10x5	mg. x 3yrs.
7. Cytocine arabinoside	0		20x10x20	mg. x 3yrs.
8.	0		5x10x1	mg. x 3yrs.
9. Methetrexateo	0		5x10x15	mg. x 3yrs.
10. Urokinase	10x10x2000	u.	20x10x2000	mg. x 3yrs.
11. Dextran Sulfate	10x10x3000	mg.	20x10x3000	mg. x 3yrs.
12. 5 % Five carbon sugar (Klinit)	20x10x500	ml	20x10x500	mg. x 3yrs.
13. Cyclophosphamide tablet	20x60x50	mg.	20x60x50	mg. x 3yrs.
14. Mitomycin tablet	10x60x5	mg.	10x60x5	mg. x 3yrs.
15. 6 - MP tablet	20x60x100	mg.	20x60x100	mg. x 3yrs.

Early Cancer Detection Clinic  
Diagnostic Radiology Division

Description of Equipment	1971	1972	1973	1974
1. T.V. unit to be coupled with the present 500 Ma. Toshiba fluoroscopic unit		1		
2. X-ray grids size				
10 x 12		1		
11 x 14		1		
12 x 15		1		
14 x 17		1		
3. Cassettes with medium speed screen 12" x 15"		10		
4. Mobile X-ray unit 300 Ma. capacitor discharge type			1	
5. Remote control fluoroscopic unit, roll film magazines			1	
6. Matsuki vertical serial film changer with two roll film magazines				1
7. Additional Toshiba tube and tube hanger for lateral exposure				1
8. Angiographic table or angiographic table top				1
9. Sakura automatic film processing machine 90 sec.				1

Early Cancer Detection Clinic  
Nuclear Medicine Division

Description of Equipment	1972	Remark
1. Colour Scanner	request	For attachment with
2. Radio-Isotope Dose Calibrator.	in 1972	Scinti-Scanner
3. Liquid Scintillation Counter.		SCC-150S
4. Scinti-Camera.		

Liver Cancer Project

Description of Equipment	Year	Remarks
1. Re-agents for 9 tests of Liver Function. - Total Protein. - A/G Ratio. - Icterus Index. - Thymol Turbidity. - Zine Turbidity. - S-Alkaline Phosphatase. - S-GCT. - S-GPT. - Blood Cholesterol.	All request in 1971	For 350-400 cases of study. All of these re-agents is supplied by the budget of Clinical Laboratory Department, the amount of ¥260,000
2. Alpha - Fetoglobulin Immunoplate.		
3. Australian Antigen Immunoplate.		
4. Uristix.		
5. Urobilistix.		
6. Ictostix.		
7. Reagents for heroglobin		
8. Sat. Sodium chloride solution.		
9. Hematest.		
1. Re-agents for 9 tests of Liver Function. - Total Protein. - A/G Ratio. - Icterus Index. - Thymol Turbidity. - Zinc Turbidity. - S-Alkaline Phosphatase. - S-GOT. - S-GPT. - Blood Cholesterol.	All request in 1972	For 500 cases of study.
2. Alpha - I Fetoglobulin Immunoplate.		
3. Australian Antigen Immunoplate.		
4. Uristix.		
5. Urobilistix.		
6. Ictostix.		
7. Reagents for hemoglobin.		
8. Sat. Sodium chloride solution.		
9. Hematest.		
10. Sterile Centrifuge Tubes.		
11. Sterile Disposable Syringes (12 cc.) with Needles.		
12. Test Tubes (normal size).		
13. Slides and Cover glass (18 x 18 mm).		For 500 cases of study.
14. White Cell Pipette.		
15. Hemoglobin Pipette.		
16. Micro-Hematocrit Tubes.		
17. Urine Cups.		
18. Fecal Container.		

Endoscopy Division

Description of Equipment	1971	1972	1973	1974
1. GTF type S new type gastrofiberscope	1	-	-	-
2. CLE accessories of the above it	1 set	-	-	-
3. Gastrocamera film viewer	2	-	-	-
4. Bronchofiberscope	-	1	-	-
5. Laparoscope	-	1	-	-
6. Esophagoscope	-	1	-	-
7. Endoscopic color television	-	-	1	-
8. GT type PA new type gastrocamera	-	-	1	-
9. Body of GT type gastrocamera	-	-	1	-
10. FTF type B new type gastrofiberscope	-	-	1	-
11. JF type B Duodenofiberscope	-	-	1	-
12. CF type SB Colon fiberscope (short)	-	-	1	-
13. CF type SB Colon fiberscope (long)	-	-	1	-
14. GLE transformer for gastrocamera	-	-	1	-
15. CLX transformer for fiberscope (large size)	-	-	1	-

Clinical Laboratory Department

Description of Equipment	1971	1972	1973
1. Spectrophometer Type 139	1 set		
2. Blood Bank Refrigerator	2 sets		
3. Blood transfusion set	100 sets		
4. Centifuge special type (fix speed) to separate plasma	1 set		
Speed 3,000-4,000 r. p. m.	1 set		
Hanger of test tube			
15 x 100 m. m.	1 set		
13 x 100 m. m.	1 set		
12 x 75 m. m.	1 set		
5. Incubator 37°C constant temperature	1 set		
6. Recording paper E. E. G.	20 packs		
7. Recording paper E. K. G.	20 packs		
8. Biochemical reagent and equipment for Liver Cancer Project	¥500,000		
<u>Autopsy Service</u>			
*1. Autopsy table with complete accessories (including scissors, knives, etc.)		1 set	1 set
*2. Body weighing balance, floor type		1 set	
*3. Balance hanging type (for weighing organs)		1 set	1 set
*4. Photographic table for autopsy material including flash, etc.		1 set	
*5. Camera with built in light meter (latest model) and lens that can be used to close up specimen up to 1:1		1 set	
*6. Refrigerator for 4 cadavers		1 set	
*7. Electric bone saw, hand type		1 set	
*8. Tissue processing machine (Auto-technicon) large size		2 sets	
*9. Toyoda microprojector XM-500 IIM (Zoom type) or latest model.		1 set	
*10. Refrigerator for 4 cadavers		1 set	
11. Refrigerator with automatic defrost freezer 14 cu. ft.			1 set
12. Electric bone saw, table type			1 set
13. Dictaphone with foot-switch and hand control complete with microphone			4 sets



Description of Equipment	1971	1972	1973
14. a. In the autopsy room with microphone hanging down from the roof			2 sets
b. For secretary to type			1 set
c. To circulate in the autopsy service for dictation, clinical summary autopsy findings, etc.			1 set
15. Earphone to use with dictaphone for secretary			1 set
16. Pumping unit for embalmed the bodies			1 set
17. Tissue embedding combination (Cryo-term, complete with vacuum infiltrator and paraffin dispenser)			1 set
18. Photomax Auto-expose recording photomicroscope			1 set
19. Microscope with Duo-observation attachment (Discussion microscope)			1 set
20. Binocular microscope with built in light source			2 sets
<u>Blood Bank</u>			
1. Deep Freezer		1 set	
2. Binocular Microscope with built in light source		1 set	
3. Water bath (control constant temperature 37°C)		1 set	
<u>Serology</u>			
1. Mini-pipette, Layagaki Co. (Manual dispenser)		1 set	
2. Auto-titer for serological test			1 set
3. Pipette washer			1 set
<u>Physiology</u>			
1. E. K. G. recording paper		50 packages	
2. E. E. G. recording paper		50 packages	
<u>Biochemistry</u>			
1. Auto-dispensor (Hirasawa)		3 sets	
2. Mini-pipette, Kayagaki Co. (Manual dispenser)		5 sets	

Description of Equipment	1971	1972	1973
3. Syringe Pipette		2 sets	
4. Thomas Seligon Pipette		10 sets	
5. Coloman - Junior Photometer			1 set
6. Thermo-mixer			1 set
7. Pipette washer			1 set
8. Auto-analyzer			1 set
9. pH meter			1 set
<u>Washing Room</u>			
Electric Dryer (Oven)		2 sets	
<u>Hematology</u>			
1. Pipette shaker (for blood melanjour)		2 sets	
2. Blood cell counting chamber		2 sets	
3. Inverted microscope (Nikon) with camera		1 set	
4. Automatic Blood Cell counter (colter-counter type D)			1 set
5. Auto-disponsor (To A. To Kushu Co.)			1 set
6. Pipette washer			1 set
7. Electrophoresis with acces- saries for Hemoglobin			1 set
8. Nikon microscope with acces- saries and camera			1 set
<u>General Clinical Lab.</u>			
1. Electric Balance, Me'tra		1 set	
2. Electric Calculator			1 set
<u>Cytology</u>			
1. Binocular microscope with built in light source			2 sets
2. Slide projector for 35 mm. photomicrograph, by Nikon with automatic focus			1 set

NOTE. \* Emergency request for Autopsy Service in 1972  
Japanese fiscal year

APPENDIX 6  
THE EXPECTED BUDGET OF JAPANESE  
SIDE FROM 1972 - 1974

Estimated cost of equipment screened in response to the  
request by Thai side

		(Unit : Japanese Yen)
1.	Clinical Laboratory Division	¥ 30,000,000
2.	Chemotherapy Division	20,000,000
3.	Surgery Division	20,000,000
4.	Radiology Division	110,000,000
5.	Endoscopy Division	<u>30,000,000</u>
Total		¥ 210,000,000

THE EXPECTED BUDGET OF THAI SIDE  
FROM 1972 - 1974

		(Unit : 1 Baht = ¥17.4)
1.	Personnel Expenses (Salary)	10,628,600 (¥184,937,640)
2.	Expenses for Public Utilities	1,250,000 (¥ 71,750,000)
3.	Expenses for consuming goods	3,642,000 (¥ 63,370,800)
4.	Equipment	3,800,000 (¥ 66,120,000)
5.	Land Purchase and Construction cost	3,490,000 (¥ 60,726,000)
6.	Subsidies (Scholaship for Nurses)	180,000 (¥ 3,132,000)
TOTAL		22,990,600 Baht (¥400,036,440)

Index of Record of Individual  
Discussion of the Annual Meeting  
June 7 - June 19, 1971

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- R - 1      X-ray Diagnosis and Radiation Therapy on June 10, 1971.
- R - 2      Radiation Therapy on June 11, 1971.
- R - 3      Radiation Therapy on June 14, 1971.
- R - 4      Nuclear Medicine on June 14, 1971.
- R - 5      Endoscopy on June 15, 1971.

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Record of discussion of the Annual Meeting  
X-ray Diagnosis and Radiation Therapy Divisions  
on  
June 10, 1971

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Participants

1. Dr. T. Kitagawa
2. Dr. Phisit Phanthumachinda

Dr. Kitagawa informed about the equipment supplied by the Japanese Government for both the X-ray Diagnosis and Radiotherapy Divisions of the National Cancer Institute of Thailand. These equipment are supplied by the budget of the year 1970 and 1971. These equipment are already decided, some are under shipment and others will be ready for shipment soon. The list of the equipment is attached to this record.

Dr. Kitagawa and Dr. Phisit discussed about the necessary additional diagnostic X-ray equipment and both agreed that they should be also requested in the three years period of extension of the cooperation. The detail of the equipment is attached to this record.

Dr. Phisit explained to Dr. Kitagawa about the gap of the energy range of the therapy machines due to installation of the 4 Mev. Linac as the first machine in which its electron beam would not give enough penetration. A medium range therapy machine is necessary to fill in the gap but there is no space being provided in the new building. The party expect to find some space after studying the construction plan in the following day.

Dr. Kitagawa explained about the usefulness of the transverse tomographic unit in the treatment planning of the patient to which Dr. Phisit agree. If such an equipment is to be installed it needs some modification of the present room that may be available due to the excessive height of the machine. Studying the detail of the submitted future plan by the Thai side both agree in the principle of requesting for the second cobalt machine during the year 1972 - 1973 before the second high energy machine which could be either Linac (13 - 15 Mev.) or Betatron.

Dr. Phisit informed Dr. Kitagawa that at present, there are 4 graduated technicians preparing to work in the Radiation Therapy Division. These technicians are now working in the Diagnostic Radiology Division and within next month they will be sent for therapy training work in other institutions. The Radiation Therapy Division is preparing to enroll more technician each year up to the minimum necessary number of two technicians for each machine. There are three diagnostic technicians at present and the Division is planning to receive more each year at least one technician for each machine with one chief technician.

Dr. Phisit also explain to Dr. Kitagawa about the principle of having radiotherapist from other institutions who will work for the Division in its early phase of operation and the plan to receive well trained therapist in the future.

According to the submitted future plan of the Thai side for Radiotherapist for National Cancer Center of 6 months each and the total number of two therapists for each year. Dr. Kitagawa explained that since

there is also shortage of experts of this field in Japan, the duration of each radiotherapist will be one person each year and his term will be within the range of 3 months to 6 months each. The duration for each technician will be 6 months.

Dr. Kitagawa informed that Automatic isodose curve plotter and Victoreen dosimeter (Radocon type) is supplied by the 1971, fiscal year budget.

Diagnostic equipment to be requested to Japanese Government.

Equipment	1972	1973	1974	Total
1. T. V. unit to be coupled with the present 500 ma. Toshiba fluoroscopic unit.	1	-	-	1
2. X-ray grids size 10 x 12	1	-	-	1
11 x 14	1	-	-	1
12 x 15	1	-	-	1
14 x 17	1	-	-	1
3. Cassettes with medium speed screen 10" x 12"	10	-	-	10
4. Mobile X-ray unit 300 Ma. capacitor discharge type	-	1	-	1
5. Remote control fluoroscopic unit, roll film type	-	1	-	1
6. Matsuki vertical serial film changer with two roll film magazines	-	-	1	1
7. Additional Toshiba tube and tube hanger for lateral exposure	-	-	1	1
8. Angiographic table or angiographic table top	-	-	1	1
9. Sakura automatic film processing machine 90 sec.	-	-	1	1

List of Medical Instruments to be provided for Thai National Cancer Institute in 1971 Japanese Fiscal Year

(\*)

1.	Radiology Department Linear Accelerator, etc.	21 items	¥ 69,240,910
2.	Nuclear Medicine Department Scintillation Counter, -----	4 items	¥ 1,670,000
3.	Endoscopy Department Gastro Camera		¥ 400,000
4.	Clinical Laboratory Department Paraffin Dispenser, etc.	18 items	¥ 5,459,600
5.	Others (emergency request) Clean Water Supply Apparatus	3 items	¥ 7,797,000
		Total	¥ 84,567,910
	Transportation Fee (10 %)		( )
	Grand Total		¥ 92,924,000

(\*) The budget transferred from 1970 Fiscal Year to  
1971 Fiscal Year

OVERSEAS TECHNICAL COOPERATION AGENCY (1)  
 No. 42, Honmura-cho, Ichigaya, Shinjuku-ku, Tokyo, Japan.

Identifying Marks & Nos.	Description of Goods	Quantity	Unit Price	Amount in yen
(1. RADIOLOGY DEPARTMENT)				
a)	for diagnosis			
1.	Roll Film Magazine "Matsuki" 14" x 11"	1		70,000
2.	Densitometer "Konishiroku" PDA- 60	1		480,000
b)	for Treatment			
1.	Examination Set for Otorhynolaryngology "Nagashima"			
(1)	Treatment Unit, both side SN Peeless	1		815,000
(2)	Treatment chair, SN	2	159,000	318,000
(3)	Flushing Cupsider	1		62,000
(4)	Spare Parts	1		30,000
2.	Fixing Set for Linear & simulator "Hama"	2	150,000	300,000
3.	Linear Accelerator "NEC" NELAC-1004 A, 4 MEV			60,660,500
(1)	Gantry	1		
(2)	Controller	1		
(3)	Local Controller	1		
(4)	System	1		
(5)	Auto Vottage Stabilizer	1		
(6)	ITV System	1		
(7)	Accessory			
	Front Pointer	1		
	Wedge Filter 15, 30, 45, 60	1		
	Shadow Tray	2		
	Gassette Holder	1		
(8)	Spare Parts for Main- tenance "two uear"	1		
(9)	Tools	1		
(10)	Air Condition in Unit "Daikin"	1		
(11)	Transformer	1		
4.	Instruments for Linear Accelerator			
(1)	Synchroscope SS-5302	1		959,400
(2)	Galvano - voltmeter DC 2012	1		30,680
(3)	Galvano - voltmeter AC 2014	1		30,680



		(2)		
Identifying Marks & Nos.	Description of Goods	Quantity	Unit Price	Amount in Yen
	(4) XY Recorder D 72	1		666,900
	(5) Water Phantom	1		52,000
	(6) Scanner	1		520,000
	(7) Manometer	1		11,700
	(8) Thermometer	1		650
	(9) Desiccator D-1	1		48,100
	(10) Stopwatch	1		13,000
	(11) Buid and Cap for "Ionex"	1		65,000
	(12) Adjustment Phantom for "Ionex"	1		195,000
	(13) Magic Cast	1		91,000
	(14) Cassett	5	6,500	32,500
	(15) Sensitive Paper GS	5	10,400	52,000
	(16) Mix D 40 kg	1		
5.	Electric Instruments for Radiotherapy Department			
	(1) Stabilized Power Supply "Kikusui" 7335	2	78,000	156,000
	(2) "Kikusui"7335 725C	1		90,000
	(3) "Kikusui"7335 665A	1		128,000
	(4) Volt-galvanometer DC "Yokokawa" 2011 0.3 V - 10 V	1		10,000
	(5) Volt-galvanometer DC "Yokokawa" 2011 3 - 100 MA	1		13,000
	(6) Universal Tester "Shimazu" MT 200	1		13,000
	(7) Universal Tester "Sanwa" 380 CD	1		6,000
	(8) Voltmeter for Vacuum Tube "Kikusui" 115	1		80,000
	(9) XY Recorder "Yokokawa" 3073, 3075, 3076	1		550,000
6.	Milling Machine "Rikens seiko" PTM-2	1		1,198,000
7.	Lathe Machine "Riken Seiko" 1000 m/m	1		700,000
8.	"Sakai" BS 200 with spare blade	1		150,000
9.	Boring Machine "Namiki" NB 0-400	1		87,800
10.	Grinder 150 m/m	1		36,000

Identifying Marks & Nos.	Description of Goods	Quantity	Unit Price	Amount in Yen
11.	Hand Drill 20 m/m	1		32,000
12.	Micrometer 200 m/m	1		4,500
13.	Tap Dais Set	1		20,000
14.	Micron Micrometer 25 m/m	1		16,000
15.	C Clamp 10 cm	3	1,000	3,000
16.	C Clamp 30 cm	3	1,500	4,500
17.	Tool Set "Matsushita" MT-1	1		87,000
18.		1		2,000
19.	Materials			
(1)	Acrylite plate 200 cm x 100cm x 0.5cm	2	20,000	40,000
(2)	" 200cm x 100cm x 1.0cm	2	40,000	80,000
(3)	" 200cm x 100cm x 2.0cm	1		80,000
(4)	Lead Plate 0.5 m/m, 1.0 m/m, 3.0 m/m	1		200,000
	Sub Total			

(2. NUCLEAR MEDICINE DEPARTMENT)

1.	Photo re-scanning attachment for Scmtoscammer sec - 150 S "Shimazu"	11		230,000
2.	Level Scanner "Shimazu" EM-10	1		200,000
3.	Scintilation counter, Well Type "Shimazu"	1		900,000
(1)	Scintilation Detector DS-Z			
(2)	Scintilator GC-301			
(3)	Stand, Well Type FS-3A			
(4)	Scaller, Tr EC-34			
(5)	Transformer			
4.	Hood Box Shimazu H <sup>3</sup>	1		340,000
	Sub Total			1,670,000

(3. ENDOSCOPY DEPARTMENT)

1.	Gastro Camera "Olympus" GT-PA with accessories	1		400,000
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(To replace Table 6 in Future Plan of Radiation Therapy Division)

Table 6  
Therapy equipment will be requested to  
Japanese Government

	Equipment	1970	1971	1972	1973	1974	Total
1.	Linac 13 or 15 Mev.	-	-	-	1	-	1
2.	Cobalt 6, 500 Rhm.	-	-	1	-	-	1
3.	Lead shield for radium ward	-	8 sets	-	-	-	8 sets
4.	Flatness recorder	-	1	-	-	-	1
5.	Film scanner	-	-	-	1	-	1
6.	Mobile radium con- tainer	-	1	-	-	-	1
7.	Fluoroluminescence dosemeter	-	-	-	1	-	1
8.	Nasopharyngofiber- scope	-	-	-	-	1	1
9.	500 Ma. Uro - X-ray unit	-	-	1	-	-	1
10.	Orthopantomographic unit	-	-	-	-	1	1
11.	Lathe	-	1	-	-	-	1
12.	Milling machine	-	1	-	-	-	1
13.	Body phantom	-	-	-	-	1	1
14.	100-250 KVP x-ray therapy machine	-	-	1	-	-	1
15.	Transverse tomo- graphy unit	-	-	1	-	-	1
16.	Controlled temper- ature x-ray processing tank	-	-	1	-	-	1

Record of discussion of the Annual Meeting  
Radiation Therapy Division  
On  
June 11, 1971  
\*\*\*\*\*

Participants:

1. Dr. T. Kitagawa
2. Dr. Phisit Phanthumachinda
3. Mr. Phaibul (Civil Engineer Dept. Ministry of Public Health)
4. Mr. Manoo (Supervisor of the S.K.S. Construction Ltd. Partnership)

The major part of to day discussion concerned about the hospital construction particularly of the radiation therapy center. There are many factors to be checked and discussed before the decision for the schedule of the heavy machines installation could be made.

1. The iron structural work of the roof of the radiation therapy center was finished for almost 90 %.
2. Conduct for the electrical wiring and piping systems for the Daikin air conditioner are completed.
3. The water piping system of the second floor through that part is about 50 % completed.
4. The concrete work could be started on June 14, and will take 41 days until removing of the frame work support or about July 26, 1971.
5. Room for the radium safe will be ready to put in through the ceiling on July 20, 1971.
6. The steel door of the Cobalt and Linac rooms will be ready by the end of August, 1971.
7. Temporary electrical supply for the dehumidifier supplied by the Japanese Government for the cobalt and the control room shall be provided in middle of August, 1971.
8. Permanent electrical wiring for the cobalt, linac machines and the Daikin air conditioner will be done near the end of August, 1971.
9. The recommended minor correction of the Linac room according to Mr. Maehara inspection will take about 7 days after removal of the frame work of the ceiling.
10. Installation of the cobalt and T. V. simulator will start from middle of September to the end of October 1971.
11. Installation of the Daikin air conditioner will be from the end of September to the end of October, 1971.
12. Shipping of the Linac and Daikin air conditioner will start at the end of August and expected to arrive N. C. I. about middle of October 1971.
13. Installation of the Linear Accelerator will start near the end of October 1971, and complete at the end of December and 2 -3 months duration is necessary for the running test.

14. The interior finishing of the Cobalt and the Linac rooms including the necessary surrounding area could be started after the installation of those machines and will take approximately one month after the beginning.
15. Clearing of the entrance to the radiation therapy center from the construction material and the beginning of the treatment to the patient on out patient basis would be possible at approximately the end of January 1972.
16. Dr. Kitagawa informed that Mr. Matsumoto term will start on the beginning of October 1971, to the end of March 1972, and Dr. Hamada from the beginning of December 1971, to the end of February 1972.

For the matter of training Thai doctor and technician Dr. Wanpen will be sent to Japan after the beginning of September 1971, for 6 months and Mr. Chalerm from the beginning of April 1972, also for 6 months because he has to observe the installation of the therapy machine and preparation of the data.

17. Dr. Phisit will be responsible for storage of the spare part of the cobalt and linac machines and all the X-ray diagnostic accessories.
18. After studying the construction plan, both agree that the planning and dosimetry room may be used for the transverse tomographic unit and it needs modification of that room to install the machine.

Part of the water closet next to linac control room may be necessary for modification to accommodate the 100-250 KVP or superficial machine. Dr. Kitagawa will study in detail about this subject and inform Dr. Phisit as early as possible and the modification of this rooms will be awaiting for his information.

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Record of discussion of the Annual Meeting  
Radiation Therapy Division  
on  
June 14, 1971

R-3

\*\*\*\*\*

Participants

Dr. T. Kitagawa  
Dr. Phisit Phanthumachinda

1. Discussion about the radium safe, it was realized that the safe is not included in the recent shipment that had arrived a few weeks ago, therefore it must be delayed for at least 2 months. Since it was planned to put the safe into the radium storage room through the ceiling, this plan must be changed and a side wall opening is necessary for moving in. This will avoid the delay of the construction because the ceiling of the radium storage room is actually the floor of the operating theater. Discussion about this problem with the construction supervisors (Mr. Paiboon and Mr. Manoo) and the original plan of moving in through the side wall was submitted and they had the opinion that it could be done without difficulty.
2. Concerning the reray equipment, Dr. Kitagawa stressed his opinion that handling and operation of these equipment should be done only by the authorized person to avoid damage and duplication of the working system that might happen in the future. The Diagnostic Radiology Division must be responsible for all the diagnostic radiology equipment of the N. C. I. .
3. Dr. Phisit said that since the fluoroscopic x-ray unit of the Endoscopy Division has rarely been in use since its installation for almost two years ago. He is considering of moving this machine into one of the available x-ray room in the new building for its regular daily use and this matter is to be done when new building construction will be completed, according to agreement of Dr. Ito who is responsible in discussion about the Endoscopic Division and Dr. Somchai.

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RECORD OF DISCUSSION OF ANNUAL MEETING  
NUCLEAR MEDICINE DIVISION  
ON  
14 JUNE 1971

R - 4

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PARTICIPANTS:

1. Dr. T. Kitagawa
2. Dr. Phaibul Sa-ngobwarchar

The two items have been discussed.

1. Some Radio-Isotope Equipment should be requested in 1972.
2. When Nuclear Medicine Expert of N. C. C. should be come to National Cancer Institute, Bangkok?

The discussion has been concluded that:

1. The Radio-Isotope Equipment should be requested.

No.	Description	Remark
1.	Colour Scanner	For attachment with Scinti-scanner SCC-150S
2.	Radio-Isotope Dose Calibrator	
3.	Liquid Scintillation Counter	
4.	Scinti-Camera	

- II. The Nuclear Medicine Expert of N. C. C., Tokyo, should be come to National Cancer Institute, Bangkok, after the completion of Dr. Phaibul's Training at N. C. C., Tokyo.

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Record of discussion of the Annual Meeting  
Endoscopy Division on June 15, 1971  
on  
June 15, 1971

R-5

\*\*\*\*\*

Participants:

1. Dr. I. Ito
  2. Dr. Phisit Phanthumachinda
1. Dr. Ito gave the list of equipment already decided for the budget of 1971
    - 1.1 GTF type S new type gastrofiberscope ..... 1 set
    - 1.2 CLE accessories of the above item.
    - 1.3 Gastrocamera film viewer ..... 2.
  2. The following items may be supplied during the year 1972 to 1974.
    - 2.1 GT type PA new type gastrocamera ..... 1 set
    - 2.2 Body of G. T. type gastrocamera ..... 1 set
    - 2.3 GTF type B new type gastrofiberscope for biopsy .... 1 set
    - 2.4 JF type B Duodenofiberscope ..... 1 set
    - 2.5 CF type SB Colon fiberscope (short) ..... 1 set
    - 2.6 CF type SB Colon fiberscope (long) ..... 1 set
    - 2.7 GLE transformer for gastrocamera ..... 1 set
    - 2.8 CLX transformer for fiberscope (large size) ..... 1 set
  3. The following items will be supplied according to the year specified.
    - 3.1 Bronchofiberscope (1972) ..... 1 set
    - 3.2 Laparoscope (1972 - 3) ..... 1 set
    - 3.3 Esophagoscope (1972 - 3) ..... 1 set
    - 3.4 Endoscopic color television (1973) ..... 1 set
  4. Dr. Phisit explained to Dr. Ito that according to the N. C. I. staff meeting on June 10, 1970, there is agreement on the type of instruments which will belong to the following departments.
    - 4.1 Endoscopy Division
      - 4.1.1 All kinds of Esophagoscope
      - 4.1.2 All kinds of gastroscope
      - 4.1.3 All kinds of sigmoidoscope
    - 4.2 Surgical Division
      - 4.2.1 All kinds of bronchoscope
      - 4.2.2 Laryngoscope
      - 4.2.3 Nasopharyngoscope
      - 4.2.4 Laparoscope
      - 4.2.5 Cystoscope
    - 4.3 Out Patient Division
      - 4.3.1 Proctoscope
      - 4.3.2 Colposcope and colpomicroscope
      - 4.3.3 Nasopharyngofiberscope

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Index of Record of Individual Discussion  
of the Annual Meeting  
on June 7 - 19, 1971  
(SURGERY)

- S - 1 Discussion on the starting of the surgical treatment  
Equipment requested in 1969 - 1970
- S - 2 Discussion of the equipment in 1971
- S - 3 Approve the record of discussion on June 10-11, 1971  
Discussion of the equipment in 1972 - 1974  
Discussion on Working Plan  
Discussion on Dispatching Japanese experts  
Discussion on sending N. C. I. 's staff to Japan for training

Individual Meeting  
Operating Room, Central Supply  
and Recovery Room

June 10, 1971 at 3.30 p.m.

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PARTICIPANTS

Dr. I. Ito  
Dr. Manop

The brief outline of the meeting are as follow:-

1. Dr. Ito raised the problem about the correct time schedule of Hospital Construction that the surgical treatment can start especially for Operating Room, Central Supply and Recovery Room.

Dr. Manop informed that because of the Hospital Construction is delayed, it effects the installation of surgical equipment and the surgical activity will start after the completion of the hospital.

2. Dr. Ito show the list of equipment for the budget 1969 Japanese fiscal year:

1. Operating Lamp
  - Large 3
  - Small 1
2. Water sterilizer for hand washing 2
3. Ultrasonic cleaner 1
4. Autoclave
  - Large 2
  - Small (high speed) 1

All of those equipment already arrived at Bangkok

3. The list of equipment of 1970 budget of the Japanese fiscal year are shown by Dr. Ito:-

1. Clean water apparatus
  - Carbon filter 1
  - Wash pump 1
  - Automatic Clean Water 2
  - Chemical Feeder Pump 1
  - Transformer 1
  - Chemicals for Boiler Water

2. Steam boiler Unit

These all equipment should be sent to Bangkok at the beginning of August 1971.

After Thai side have the blue print from Ogano Company, Thai side will inform the Japanese side that when the definite time for engineer to come to Bangkok for installation.

4. Equipment of surgical in 1971 budget fiscal year, Dr. Ito planned to discuss on the individual meeting on June 11, 1971, at 9.00 a.m. Those equipment for Surgery Division and Anesthesiology Division cost about 27 million yen (1.5 million Baht).
5. Equipment of surgery in 1972 budget fiscal year will be discussed on Monday, June 14, 1971 at 9.00 a.m.  
Dr. Ito informed that Japanese side will send 2 engineers for water cleaner apparatus and boiler to N.C.I. after the Thai side already get the blue print from N.C.C. and the Thai side will let them know the definite time. And after that during January to February 1972, N.C.C. will send Dr. Ogata and three engineers to come to N.C.I. for advice and installation of some machine.
6. About the Japanese expert from N.C.C. and the N.C.I.'s staff will be sent to Japan for training. Dr. Ito suggested to Dr. Manop to discuss about them on Monday, June 14, 1971 at 2:00 p.m.
7. For the final of the individual meeting should be reconfirm on Tuesday, June 15, 1971 at 9.00 a.m.

\*\*\*\*\*

Individual Meeting  
Operating Room

S - 2

June 11, 1971 at 9.30 A.M.

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PARTICIPANTS

Dr. Ito  
Dr. Manop

The brief outlines of discussion:-

1. Dr. Manop (Thai side) informed about the equipment which had allocated from Budget Bureau for 1971 Thai fiscal year (See appendix 1).
2. Dr. Ito (Japanese side) informed the list of the equipment for Operating Room, Central Supply and Recovery Room that to be sent by the Japanese Government, possibly 1971 (see appendix 2).

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Individual Meeting  
Operating Room, Central Supply  
and Recovery Room

S - 3

June 14, 1971

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Participant

Dr. Ito  
Dr. Manop

The brief outline of the discussion:-

1. Approval of The Record of Discussion on June 10 - 11, 1971

The individual meeting of Operating Room, Central supply and Recovery Room about The equipment of 1971 Japanese fiscal year both side are approved.

2. Thai side requested some of equipment for Operating Room, Central supply and Recovery Room (see appendix 3A) Japanese side approved generally under the cadre of the apparatus consider to be necessary after 1972 (see appendix 3B).

2.1 The list of Anesthetic equipment will be selected and prepared by Japanese Anesthesiologist, N. C. C.

2.2 About the surgical instrument sets, Dr. Ito will consider to select them in category such as:- knife, needle, holder, etc.

2.3 The list of content of the operating set will translate and send to the Surgical Division of National Cancer Institute. And when the hospital is opened, the N. C. I.'s nurses will prepare the operating instrument following the translating list.

3. Discussion on Working Plan (Item 6)

3.1 Before completion of Cancer Hospital building

A) Water softener and the boiler are expected to arrive at Bangkok in the end of September 1971.

B) The last operating lamp of the first of Operating Room, and the surgical equipment will arrive at Bangkok in November or December 1971.

3.2 After completion of Cancer Hospital building, the surgical activity has to start as soon as possible.

A) Operation - Operating Room.

B) Surgical Ward

4. Discussion on Dispatching Japanese Experts (Item 5)

According to the working plan.

- 4.1 Before the completion of Cancer Hospital Building. Dr. Ito (Japanese side) informed at the meeting that the Japanese Government will send the engineer for installation the water cleaner system (see appendix 4A) and the surgical instrument, Dr. Ogata, N. C. C. 's surgeon, is the supervisor for the surgical installation. They will come to National Cancer Institute in January 1972 (see appendix 4B).

Dr. Manop (Thai side) suggested that at the beginning of 1972, many of the Japanese Experts and engineers will be dispatched to National Cancer Institute and the Cancer Hospital Construction will be completed. So Dr. Ito has to come to National Cancer Institute to supervise the Japanese team and to cooperate closely with the Thai side.

- 4.2 After the completion of the Cancer Hospital building.

The Japanese Government will send the Japanese experts to National Cancer Institute after sending the N. C. I. 's staffs to Japan for training and come back to N. C. I. to be the counterparts of the Japanese experts.

Dr. Ito (Japanese side) informed that the Japanese Government approved the future plan about the Japanese expert for the Surgery Division and Anesthesiology Division. Thai side had submitted this request to the Japanese Government at the conference in Bangkok on January 17 - 28, 1971.

At this time Dr. Ito informed about the Japanese experts to come to N. C. I. only 1972. (see appendix 5).

Dr. Manop requested 4 teams (Surgeon, Anesthesiologist and Nurse) to cover the whole year after 1972.

5. Training of N. C. I. 's Staffs (Item 4)

Thai side requested the Japanese Government to sending the N. C. I. 's staffs to Japan for training at N. C. C. (see appendix 6).

6. About the dispatching of Japanese experts and sending N. C. I. 's staff for training in Japan after 1972 will be decided at the next annual meeting.

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Appendix 1

Equipment allocation from Budget 1971 Thai fiscal year

Equipment	Quantity
<u>Surgery Division</u>	
1. Operating table	1
2. Operating lamp	1
3. Instrument cart	1
4. Instrument sterilizer	2
<u>Anesthesiology Division</u>	
1. Anesthetic machine	1
2. Ventilator, respirator	1
3. Cardiac resuscitator	1
- pace maker	
- defibrillator	
- Synchronizer cathode tube mir mornitor	
4. Laryngoscope	3

Sppendix 2

Various equipment apparatus consider to be sent by Japanese Government, possibly 1971.

Equipment	Quantity
1. Operating lamp (for Dome)	1
2. Operating table	4
3. Electrosurgical unit	4
4. X-ray machine (Image intensifying mobile)	1
5. Mobile suction unit	4
6. Cardioscope	2
7. Oxygent tent	4
8. Respirator (with IPPB)	
- Mark 4 + 7 (each)	1
- Mark 8	3
9. Pace maker	1
10. Anesthetic machine	4
11. Laryngoscope	5
12. Endotracheal tube	6
	dozens
13. Infusion pump (portable)	2
14. Suction and nebulizer unit	3
15. Continuous low pressure suction unit	5
16. Outlet apparatus of oxygen	4
17. Outlet apparatus of suction	4
18. Gastrectomy instrument set	1
19. Esophagectomy instrument set	1
20. Lobectomy instrument set	1
21. Maxillary sinus operation set	1
22. Hysterectomy instrument set	1
23. Urinary bladder operation set	2
24. Cooler	2
25. Anesthetic apparatus	2
26. Irrigation stand	2
27. Complementing table	
- Large	2
- Small	4
28. Double table Sterlizing tray set	2
29. Triple table Sterilizing tray set	2
30. Working table	4
31. Cart for carrying the apparatus	2
32. Ice box (for specimen)	2
33. Instrument cabinet	3



Appendix 3 A  
Surgical apparatus requested to Japanese Government  
in 1972 - 1974

Instrument	Quantity
<u>A. Operating Room</u>	
1. <u>Serveral operation instrument</u>	
Radical esophagectomy (Laparotomy)	1 set
Rectal amputation	1 set
Breast amputation	1 set
Nepharectomy instrument	1 set
Kuntscher intramedullary nailing instrument	1 set
Upper or lower extremity amputation	1 set
Laminectomy (special cord) operating instrument	1 set
Craniotomy instrument	1 set
Conc resection operating instrument	1 set
Paranasal sinus operating instrument	1 set
Laryngectomy (the pharynx) instrument	1 set
Struma operating instrument	1 set
Jaw and tonque resection operating instrument	1 set
Cystectomy and artificial vesicular replacement instrument	1 set
Ureterostomy operation instrument	1 set
Prostatectomy operation instrument	1 set
Nakayama's blood vessel suture instrument	1 set
2. <u>Surgical endoscope</u>	
Colofiberscope	1 set
Bronchofibroscope	1 set
Peritoneoscope (Laparoscope) with automatic pneumoperitoneum set	1 set
Cystoscope complete set for ureteric catheterization and electric cauterization	1 set
Choledocho-fibroscope	1 set
3. <u>Others</u>	
Irrigator stand	6
Double table	2
Complementing table	
Large	2
Small	4
Cart for carrying apparatus	3
Instrument cabinet	12
Working table	8
Ice box	3
Suction Unit	4

Appendix 3 A (Cont'd)

<u>Instrument</u>	<u>Quantity</u>
Kick bucket rack	10
Bucket	10
Linen cabinet	10
Brush sterilizer container	10
Plaster cart	1
Plaster cutter	1
Balance (for measuring memorrhage)	5
Surgical stop watch	5
<u>B. Recovery Room</u>	
1. <u>Bed</u>	5 sets
2. <u>Travelling system spotlight</u>	1 set
3. <u>Others</u>	
Oxygen tent	1 set
Electric clinical Thermometer	2 sets
Instrument table	1 set
Suction bottle (Incase there is piping)	5 bottles
Oxymeter	1 set
<u>C. Central Supply</u>	
1. Needle washer	2 sets
2. Various tray to set	in sets
3. Other	
Nebulizer	7 sets
Wheel stretcher	5 sets
Seal machine	1 set

Appendix 3 B  
Apparatus considered to be necessary between 1972 - 1974

Equipment	Quantity
1. <u>Operating Room</u>	
Several operation instrument set	14
Colofiberscope	1
Others	
2. <u>Anesthesia</u>	
Infant circle	2
Multichannel type of E. K. G.	2
Tube connector	12
Air way (various size)	12
Table	5
Others	
3. <u>Recovery Room</u>	
Bed	5
Travelling system spotlight	1
Others	
4. <u>Central Supply</u>	
Needle washer and others	
Various trys to set	

Appendix 4A

Japanese engineer for Water Cleaner System

Field of experts	No. of expert	Duration	Expert from
1. Boiler engineer	1	1 month (Oct. 1971)	Fuji Co.
2. Clean Water Softener	2	1 month (Oct. 1971)	Ogano Co.

Appendix 4 B  
Japanese expert and engineer for the surgical installation

Field of experts	Number of expert	Duration
1. Supervisor for installation (Dr. Ogata, NCC's surgeon)	1	2 month (Jan. - Feb. 1972)
2. Operating lamp engineer	2	2 weeks (Jan. - Feb. 1972)
3. Autoclave engineer	1	1 month (Jan. - Feb. 1972)
4. Water sterilizer for hand washing and other surgical instrument engineer	1	2 weeks (Jan. - Feb. 1972)
5. Ultrasonic cleaner and Anesthetic machine engineer	1	2 weeks (Jan. - Feb. 1972)

Appendix 5

Japanese expert dispatching to NCI in 1972

Expert	No. of expert	Duration
1. General surgeon	1	3 months (July - Sept. 1972)
2. Gynecologist	1	3 months (Oct. - Dec. 1972)
3. Anesthesiologist	2	3 months each (July - Dec. 1972)
4. Surgical Nurse	1 or 2	1 for 6 months or 2 for 6 months each (July - Dec. 1972)

Appendix 6

Number of personnel for training in Japan

Personnel	No. of Personnel	Duration
1. Gynecologist (Dr. P. Penkae)	1	6 months (as soon as possible)
2. Anesthesiologist (Dr. L. Sathaporn)	1	6 month (The end of 1971)
3. Surgeon (Dr. Y. Chuladej)	1	2 months (Oct. - Nov. 1972)
4. Surgical Nurse	1	6 months (From Oct. 1972)
5. Registered Nurse for Central Supply	1	3 months (From Oct. 1972)
6. Social Worker	1	1 month (Sept. 1972)

## 7. おわりに

今回の年次協議は日本の協力を3年間延長するかどうか、また延長するとすれば、豊かな成果を得るためいかなる条件を整えるべきかを決めるという目的を持つ重要なものであった。

海外医療協力事業は、外交事業であると同時に日本の国際公衆衛生活動の重要な一環でありその成否は単に医療関係者だけの問題に止まらず、日本の国際的信用にかかわる性格のものである。

従って、協力期間延長に関する日本の意志と態度の決定にあたっては、関係者の中で慎重な検討が重ねられた。

専門家として、バンコフに外向き直接N.C.I. プロジェクトに対する援助活動を行なった経験のある間、後者の間では病院完成後においてこそ本格的援助活動が始まるのであって、病院完成と同時に援助を打ち切った場合は、病院運営を軌道に乗せることはできず、今までの苦労が無駄になるおそれがあるので、協力延長は当然だとする意見が圧倒的であった。

しかし、他方、タイ側の要請に引きずられて協力を延長するのは好ましくない。なるべく速やかに打ち切りタイ自身の力で運営させるのが、海外医療協力の本旨であるという消極論も一部に根強いものがあつた。

そこで、1971年1月下旬以降数回にわたり、OTCA 外務省、厚生省、国立がんセンターの関係者の会議を開催し、意見を調整した結果、タイ側が自力でN.C.I. を運営し得るようになるには、病院完成後約3年間の日本の援助が必要であろう。

従って、今後3年間協力を続けるべきだとの統一見解に到達したのである。

また、年次協議派遣団には、厚生省の責任者を含めるべきであるとの国立がんセンター関係者の提案のもとに医務局新谷医事課長の参加をみたが、このことは海外医療協力事業を展開するにあたり、医療行政責任者の見解を直接積極的に反映させることができる点、極めて好ましいことであつた。

また、年次協議後半において、外務省樋口事務官の現地参加を見たが、この事も、現地における派遣団の意志決定にあたり大変好都合であつた。

これらのことは、今後の年次協議においても踏襲すべきであると考えらる。

討議録の日本例腹案については、数次にわたり検討を重ね、最終的にOTCA 医療協力部、外務省技術協力課長、厚生省医務局医事課長、国立病院課長、医務局長、医務局次長の了解を得た上、英文に翻訳して携行した。

以上のような準備を積み重ねた上、現地において協議を行なったため、タイ側の積極的受入れ態勢OTCAバンコフ事務所の全面的協力とあわせ、一、二の点でホットな論議をかかわしたこともあつたが、全体として極めてなごやかな雰囲気の中に会議が進められ満足な結論に到達し、日、タイ双方の理解を一段と深め、深善の実をあげ得たことを喜ぶものである。



